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THE AMERICAN SCHOOL-BOARD JOURNAL

A . . PERIODICAL . . OF
SCHOOL ADMINISTRATION



· ANNUAL ·
SCHOOL BUILDING
· NUMBER ·

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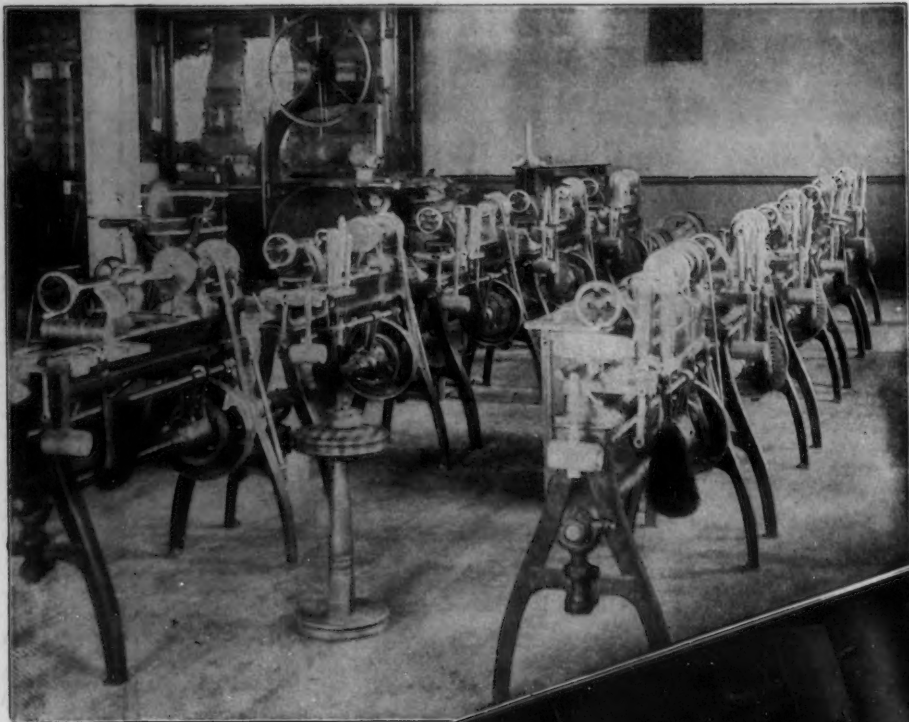
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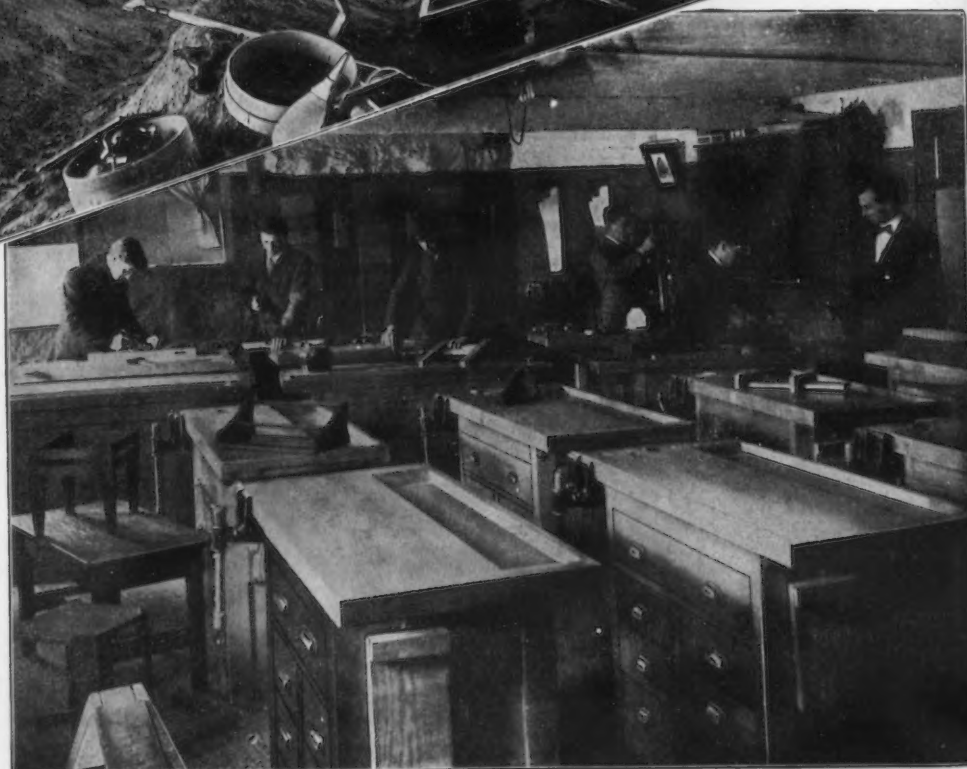


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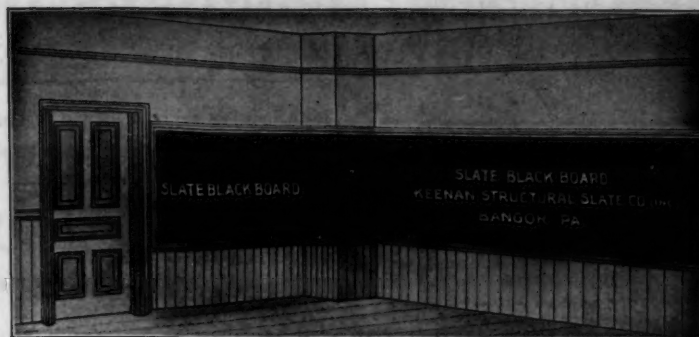
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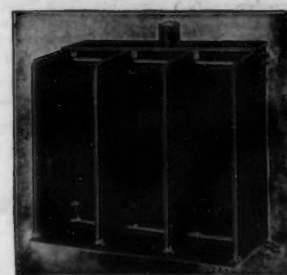
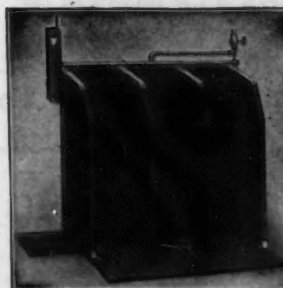


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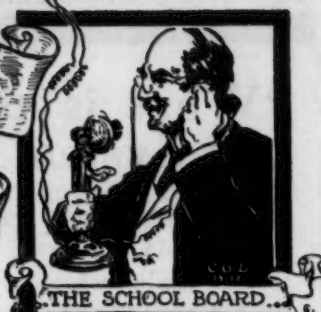
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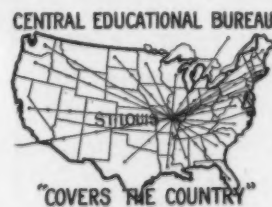
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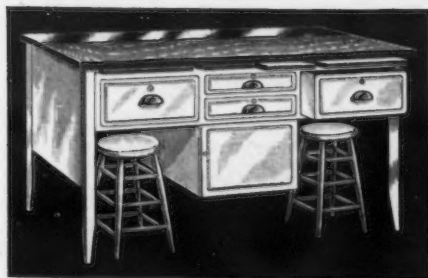
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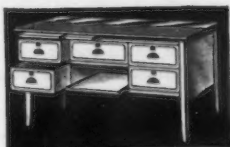
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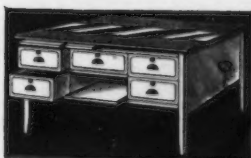
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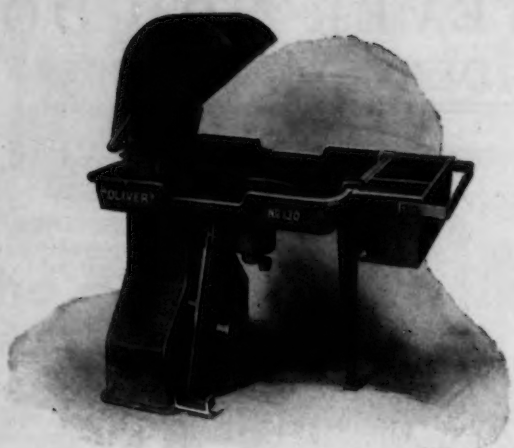
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See Page 71

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School Board Journal

Founded March 1891 by WILLIAM GEORGE BRUCE

Volume XLVIII, Number 4

APRIL, 1914

Subscription, One Dollar per Year

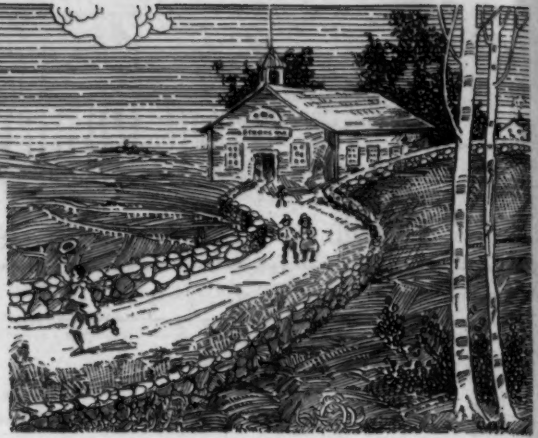


THE PARAMOUNT DUTY



Planning the School Grounds

By PROF. A. T. ERWIN, Iowa State College



A well planned school ground embraces two important features. The first is an ample playground area. The main business of the school ground is to provide recreation and exercise for the pupils. In considering carefully the requirements in this regard on the one hand and the area usually available on the other, one is forcibly impressed with the fact that the original planners either lightly regarded the importance of playground areas or else lacked information as to reasonable requirements along these lines.

However, it is not merely a question of ample playgrounds—they must be properly planned and organized. Pupils of different ages, temperaments and sexes are interested in different games. The proper planning of the grounds will greatly facilitate their use. The girls should have their quarter with tennis courts and basket ball and corresponding provision made for the boys, including football and baseball. The designer should also keep in view the practical requirements of the various games, as the station of the batter to the afternoon sun and the location of the tennis courts on a north and south axis, etc.

For the younger children, playground apparatus should be provided. School boards are slow to recognize the fact that it is just as illogical to send the child out to play without anything to play with as it is to send a workman to the field without tools. Sand piles, teeter boards, and slides—simple in design but strongly built—should be provided.

The teacher does not always appreciate the

possibilities of the playgrounds from an educational point of view. The time will come when every well organized school will have a playground conductor. I do not mean a football coach who will spend all of his time on a team that is getting enough exercise for all and the remainder going without any. We need games of a more democratic character—games that will give everybody something to do, not necessarily at the expense of football but to supplement it.

The playgrounds, if properly directed, can be used to teach some of life's most important lessons. The value of team work and the concentration of our physical and mental powers on a given goal are nowhere better exemplified than on the athletic field.

The second essential of the school grounds is the landscape. As a school home the grounds should be made attractive. "If eyes were made for seeing, then beauty has its own excuse for being." To secure an attractive landscape setting for the building, the lawn and playground areas must be divorced. Provide for the playgrounds area to the rear with the building fairly well forward, say within fifty feet of the street. In this way a limited area is set aside for lawn purposes and this should be rigidly reserved as such, otherwise the lawn and its accompanying features will soon be largely a matter of history.

The walks should be set high enough and with a sufficient crown to drain well. They should lead with reasonable directness to the centers of activity but not necessarily straight. Where

the distance is such as to warrant, a long sweeping curve may be introduced to advantage. On the inside of this curve is an appropriate place for a clump plant of trees or shrubbery. This not only gives them a location where they may be seen from a number of different angles but also suggests a logical reason for the curve as going around an obstacle.

In the corners about the base of the building is the logical place for shrubbery. They should be planted sufficiently close together to secure a mass effect. Three feet apart is a satisfactory distance for most kinds. The selection of varieties is very largely a matter of local conditions and personal taste. The important point is to use species that are hardy and vigorous and which will provide a continuous bloom period.

The major portion of the tree planting should be along the back and sides. In this way, the foliage may be used as a border corresponding to the frame of a picture and the proper lighting of the building is not interfered with.

In the selection of species for lawn planting special care should be exercised to secure hardy, thrifty kinds as the janitor is not likely to do very much coddling.

The plantings on the school grounds may be made to serve a useful purpose in acquainting the student with the desirable varieties of shade trees and ornamentals for his locality.

In the majority of cases the enlargement of the grounds is the first step, tho often proper planning would contribute to the more efficient use of the space at present available.



MODEL RURAL SCHOOL, CORNELL UNIVERSITY, ITHACA, N. Y. This Building with its playground and garden is almost ideal.

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SELECTING A SCHOOL ARCHITECT

By WILFRED W. BEACH, A. I. A., Nashville, Tenn.

The remarkable growth of our country in recent years has been nowhere more evidenced than in our smaller cities and towns. One direct effect of this growth has been the considerable advance in the quality and quantity of the school buildings in communities of this class. Unfortunately, however, as is the case with many other phases of this intensely commercial nation, the improvement in quality has by no means kept pace with the increase in quantity of such structures. The deficiencies of new school buildings erected to replace those superannuated structures of our boyhood is all too painfully apparent.

Why should this be so?

In the last analysis, to be sure, this particular defect in our educational system, like many other defects so bountifully discussed, must be traced to the penurious taxpayer and to faulty systems of taxation. These ailments will prove tedious in the curing. So long as our non-enterprising taxpayers in certain communities are particular to elect to their Boards of Education, men whose sole platform plank is one emblazoned "*Economy*," just so long will we find those board members exercising their functions with the least possible expenditure of cash, regardless of necessities and results.

Many men who are individually good and successful business men will, as soon as elected to this particular public office, enter upon a "watch-dog of the treasury" policy that is inimical to the best interests of the children of a community. We see also on our school boards many men who really have the interests of the young people at heart but, who in the impending necessity of a new structure, are confronted with problems which tax the ability of men experienced in serving on building committees. They have not ready at hand any compendium to guide their endeavors. They think of an architect merely as one who "makes plans." In their uncertainty they seek the counsel only of each other or perhaps of their superintendent who knows well what he wants but not, any more than his employers, how to get it. But, at any rate, a building committee is appointed, oftentimes an unwieldy committee of the whole board; and an election is called to vote bonds for the very least amount that the required building could possibly cost. Strange to say the election generally carries, without particular campaigning, and then the directors wish they had asked for a few thousand more.

Now follows the most common and dangerous mistake of the transaction—an announcement that a competition will be held for the purpose of selecting an architect for the proposed building. The committee has not informed itself—does not know that the better class of architects, quite generally, decline to enter that sort of contest. There are several reasons for this, some of which become painfully apparent to the Committee as their work progresses. Even tho a formal competition is not announced, it is evident that one will exist, whether or not notices are sent out to that effect, unless the Board forestalls such action by directing employing their man earlier in the game.

Such a contest as an informal competition generally proves, should be avoided by all means. If not, the Committee will find:

First, that it is difficult if not impossible to persuade responsible architects of good practice to become candidates for their service.

Second, that some who are considered dependable and who might otherwise compete, cannot suit their convenience to that of the Committee.

Third, that the Committee, solely by virtue of having a competition, has limited its selection

of a design to the few offered by a limited number of designers (perhaps none first class) when they would otherwise have the whole known field of published schoolhouse work from which to choose.

Fourth, that many of the statements made by contestants are utterly undependable, made only for the purpose of "getting the job."

Fifth, that tho there may be something attractive to the thrifty board members in a reduced fee offered by an architect, yet it must be borne in mind that any offer of this kind is to be looked upon with suspicion.

Not all who call themselves "architects" are really such. In only three of our states has any attempt been made to protect the public against the charlatan in this profession. Many who make it their business to rush before building committees to urge the acceptance of their services are merely clever salesmen who, if employed, hire others to do all the architectural work, themselves hurrying on to the next victims. Such imposters will not hesitate in the most plausible and convincing manner to promise far more than can be performed in the way of securing an elaborate structure within the appropriation and exacting a minimum fee for the service. They even dub themselves "schoolhouse specialists" and urge that qualification as a further reason for being retained.

An amateur architecturalist once said disparagingly, "There's no necromancy about architecture." He spoke more truly than he knew. There is an infinity of things for an architect to learn and no one ever exhausts the fountain of knowledge thereof. But there is no witch-craft about it—no mystery such as some enterprising business getters attempt to wrap around it—perhaps as much a cloak to hide their own shortcomings as to convince their intended clients of the advantage to be gained by employing such "Schoolhouse Specialist" as the aforesaid man of enterprise.

Now, as a matter of fact, other authorities to the contrary notwithstanding, there are few types of structure more simple in the planning than an elementary schoolhouse. Any architect of proper technical training and experience assails the designing of his first building of the kind with a greater amount of standardized data ready at hand than would be accessible for any other initial undertaking in his curriculum. He finds unquestionable authority for floor area for each size desk, for width of aisles, height of windows, blackboards and ceilings, area and direction of light, degree of heat, sanitation, air supply per occupant, etc., etc., down to the most minute detail. He has only to follow these directions leaving to his individual discretion simply the adaption of these rules to the limitations of the case in hand and his taste in exterior treatment. (He rarely has opportunity for interior embellishment. Such rank waste of taxpayers' money would not for a moment be countenanced.)

He has then to consider the number of pupils to be accommodated per room, the number of such rooms to be provided, the required auxiliary facilities, the requisite number of stories, the relation of the building to its site and most advisable method of adapting the details of construction to the appropriation. Naturally the last named feature is the controlling one and is most responsible for the good or bad in our current schoolhouse architecture. It is often a hard fight for an architect to influence a board to spend enough, even when it has at its discretion the final authority as to the amount to devote to a given structure. Too often the board is handicapped by actual lack of funds, due to the penuriousness of the voters, as has

been pointed out. Many times an architect who is too urgent in the insistence that a certain appropriation is inadequate will find such attitude working against his appointment in favor of some less principled individual who is willing to promise that the funds will supply what is wanted.

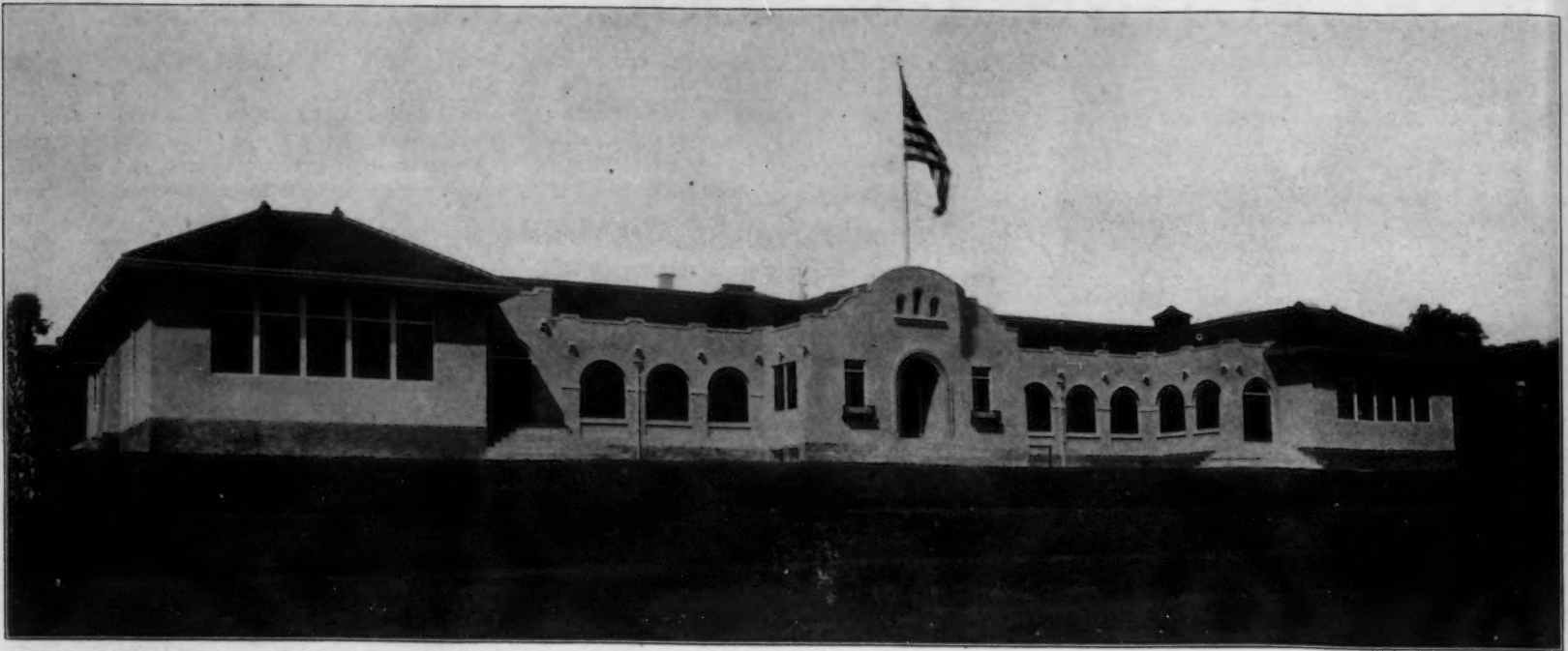
This is not a treatise on the subject of schoolhouse design. That field is ably filled. The purpose of this article, as has been stated, is rather to offer a suggestion to school building committees as to how to proceed in their venture.

First, then, let us assume that it is agreed by a board that a building is needed. A committee is appointed, preferably of not more than three members. Let such committee select its architect as soon as possible after it is organized—select him on account of his availability and his general reputation for satisfactorily serving his clients; and assuming of course his proper preliminary education and training; but quite regardless of whether or not he has previously built a schoolhouse. His charge will be no greater than if he is employed after the committee has done some of his work. At this stage of proceedings, the question of how much can be produced for a given outlay has not yet arisen except in an indefinite way. It is for the architect to report upon in connection with other matters.

Let the architect then, at the beginning of things, discuss with the committee or the whole board the general conditions of the problem, whether or not a new building or an addition is best, whether a new building shall replace the old or if a new site is needed and what site is best available. Let the architect familiarize himself with existing school structures in the district and with new buildings in adjacent districts. Let him learn and report upon their advantages and disadvantages, getting all possible data from teachers, principals and superintendents, and let him embody all these things in a report to the committee and the committee to the board. Then let him and the committee discuss how much larger the new building shall be than present conditions require—how many pupils are ultimately to be accommodated; and from this and other data, let the architect outline his first preliminaries and rough estimate of cost, with such recommendations as he sees fit to make. The question of methods of construction will come in here—whether fireproof, semi-fireproof or swift-burning.

Parenthetically, it may not be amiss to make a forceful plea for semi-fireproof construction for detached school buildings. There is no great need for their absolute fireproofness, but let them at least have a fireproof first floor and stairway enclosures, the latter so arranged as to offer adequate fire escape without the disfigurement of the ordinary outside open iron stair which is not a fire escape at all, in its proper sense, but a child trap. It goes without saying that the means of escape for children in case of fire or panic should be those to which they are most accustomed. Each building should have two or more such inside fireproof stairways in every day use, but cut off absolutely from the balance of the building by automatically closing fireproof doors opening into the stair shaft. With such construction and the further precaution of having all classroom and entrance doors amply large and opening out, additional fireproofness becomes simply a matter of economics subject to the determination of the individual board.

An important feature, too, is that the building should be so constructed as to render future addition readily planned.



UNION HIGH SCHOOL, JACKSON, CAL. Walter Parker & Co., Architects, San Francisco, Cal.

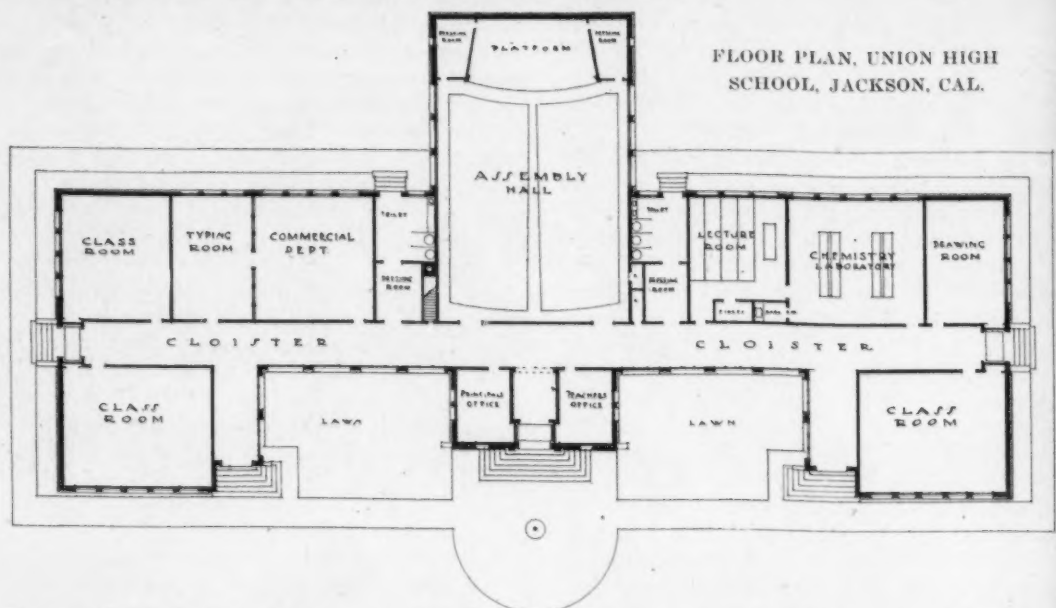
With the foregoing information in the shape of a report from the building committee to the Board of Education, the latter can now decide intelligently on the size and kind of building required and can arrange the appropriation accordingly.

It will be noted that all of the work done by the building committee and its architect up to this point, is work usually performed by the committee itself, without technical assistance. Such committee, if arriving unaided at conclusions of more or less doubtful accuracy, is quite likely to also carry a false idea of the functions of an architect. It will frequently convey to its architect or to a candidate for service, the impression that it has accumulated all the available knowledge on schoolhouses, their cost, planning and construction, and is only in need of a draftsman who can put the ideas of the committee on paper and, perhaps, later act as a detective to assist the board in keeping the contractor honest.

Needless to say such committee generally becomes the victim of some charlatan who, although a stranger to the members of the board, quickly puts himself on good terms with them thru superior salesmanship, backed by evidence of his "specialization" in schoolhouse design. Such a man subordinates everything to acquisition of the "job." This, once safely landed, becomes simply a means to the end—that of deriving profit regardless of all other considerations. It is difficult to conceive how his subsequent dealings with contractors on behalf of the district is to redound to the benefit of the latter. If it be that the board is unfortunate in engaging contractors who need watching, obviously a shyster architect is not a safe watchman. Or, supposing a board, which failed to employ an architect until after preliminaries were well under way and the general points about the building decided, then chanced to employ a worthy man, it is easy to see how he might be greatly embarrassed by gross inconsistencies in the instructions given him. Such is, indeed, frequently the case and the resulting building reflects but little credit upon either the school board or the architect.

Assuming that the board did, thru its building committee, employ a capable architect to assist in all preliminaries, such man will continue his work while the necessary negotiations are under way for securing the appropriation. When that has been obtained he will have a month's work done in advance of what would have been the case had the committee waited until the passing of the appropriation before employing him.

The best service is rendered those committees



who employ their architects in the fall or early winter, have working drawings made at once and take bids in February or March, all in advance of voting the appropriation. Then actual work can begin in late March or April and the building (if not too large) finished early the following winter. It is considered quite proper to employ an architect with the expectation of paying him from the contingent fund, with the understanding that he is not to be fully reimbursed if the vote on the building tax fails to carry—or until it does carry.

There is considerable advantage, too, in knowing exactly how much a building is to cost, from bids actually in hand, rather than placing dependence on preliminary estimates. It is considered proverbial that such estimates are not dependable. This is, undoubtedly, due to the fact that architects are frequently forced by their clients to make low estimates or lose the work; the result of which is that the degree of accuracy of the estimate in many instances is to be measured by the co-efficient of the relation between the pressure brought to bear on the architect and his power of resistance. If the architect be unscrupulous or unduly unpeccunious, the owner will extract a correspondingly worthless "estimate."

The estimate of a self-respecting practitioner is based upon a comparison with past performances in kindred lines. Its dependability

(Concluded on Page 68)

UNION HIGH SCHOOL, JACKSON, CAL.

This building was designed for a small community whose growth in population is not rapid

but which is demanding facilities for the more important modern branches of instruction. It stands on a large piece of property overlooking a village and a beautiful valley.

The building is constructed of concrete and roofed with Mission tile. The wide "Cloister" running thru the building assists materially in keeping the atmosphere cool during the hot days, and, being enclosed in winter with movable sash, makes a large space well lighted and protected and quite attractive for other purposes than a mere corridor. The winters are mild in this section of the country and there is little difficulty in heating a structure of this size and exposure.

The building is practically fireproof and the rooms are finished in the most modern methods. The assembly hall will seat 300 persons and is well lighted by outside light independent of skylights which assist light in the rear part. The floor is of maple and the stage is fitted with every convenience for school and community purposes, the latter being much in demand in this particular case.

All things considered it is quite a model school of its type and every mechanical device for the comfort of its inmates has been provided for, including oil burners for the mechanical heating and ventilating plant and connections for moving picture apparatus. The cost complete was \$25,000.00.

The architects were Walter Parker & Co., San Francisco, Cal.

THE H. AL

The new recently completed corner in Roxbury walk, from triangular-lem in plan.

The building light Indian style some of the most beautiful date. The inside and exceedingly

As the city have a wide of the floor quite a practical effect little mass any one w bathed in The city building a the practical met; and the angular grades of gles and b low cost.

The exterior being massive Street facade sculpture on this page order to g an oblique ture does impressive

The building with individual students; ing and ventilation toilets and

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THE HIGH SCHOOL OF PRACTICAL ARTS FOR THE CITY OF BOSTON, MASS.

The new High School of Practical Arts, recently completed at Boston, Mass., is located at the corner of Greenville and Winthrop Streets in Roxbury. With twelve feet fall in the sidewalk, from the highest to the lowest points of a triangular-shaped lot, it presents a difficult problem in planning and arrangement of plans.

The building is built of light gray brick, with light Indiana limestone trimming in a modified style of the Greek, and is said to be by some of the school authorities of Boston, the most beautiful school building in the city to date. The style is extremely simple and severe, inside and out, as befits a school, but is exceedingly monumental in character.

As the requirements for lighting in the Boston city schools are that each classroom shall have a window glass surface equal to one-fifth of the floor area of the room lighted, it becomes quite a problem to obtain a dignified architectural effect with so much window area and so little masonry. That this has been obtained, any one who will view the building when it is bathed in sunshine in the morning, will admit. The city has obtained a remarkably successful building architecturally as well as one in which the practical requirements are perfectly well met; and considering its area, that it is fireproof, the angular shape of the lot and the varying grades of the streets, necessitating so many angles and breaks, it is a building of remarkably low cost,—\$320,000.

The exterior is rather severe, the ornament being massed about the center of the Greenville Street facade, in which is located the main entrance guarded by two caryatides of heroic size, sculptured from stone, shown in the photograph on this page. The streets are so narrow that in order to get a view of the whole front, rather an oblique view has to be taken so that the picture does not give one an adequate idea of the impressiveness of the whole structure.

The basement contains a large locker room, with individual steel lockers for each of the 800 students; the gymnasium with the locker, dressing and shower bath rooms; the heating and ventilation; the cold storage rooms; the main toilets and a large refrigerator room.

The first floor contains, besides classrooms, a reception room, master's suite, a library, teachers' and physical assistants' rooms and an auditorium of about 800 capacity, with stage, dressing rooms and organ chamber.

The auditorium has a balcony opening from the second floor, which adds materially to its seating capacity. Above the auditorium wing of the building, the roof is arranged as a roof garden and playground.

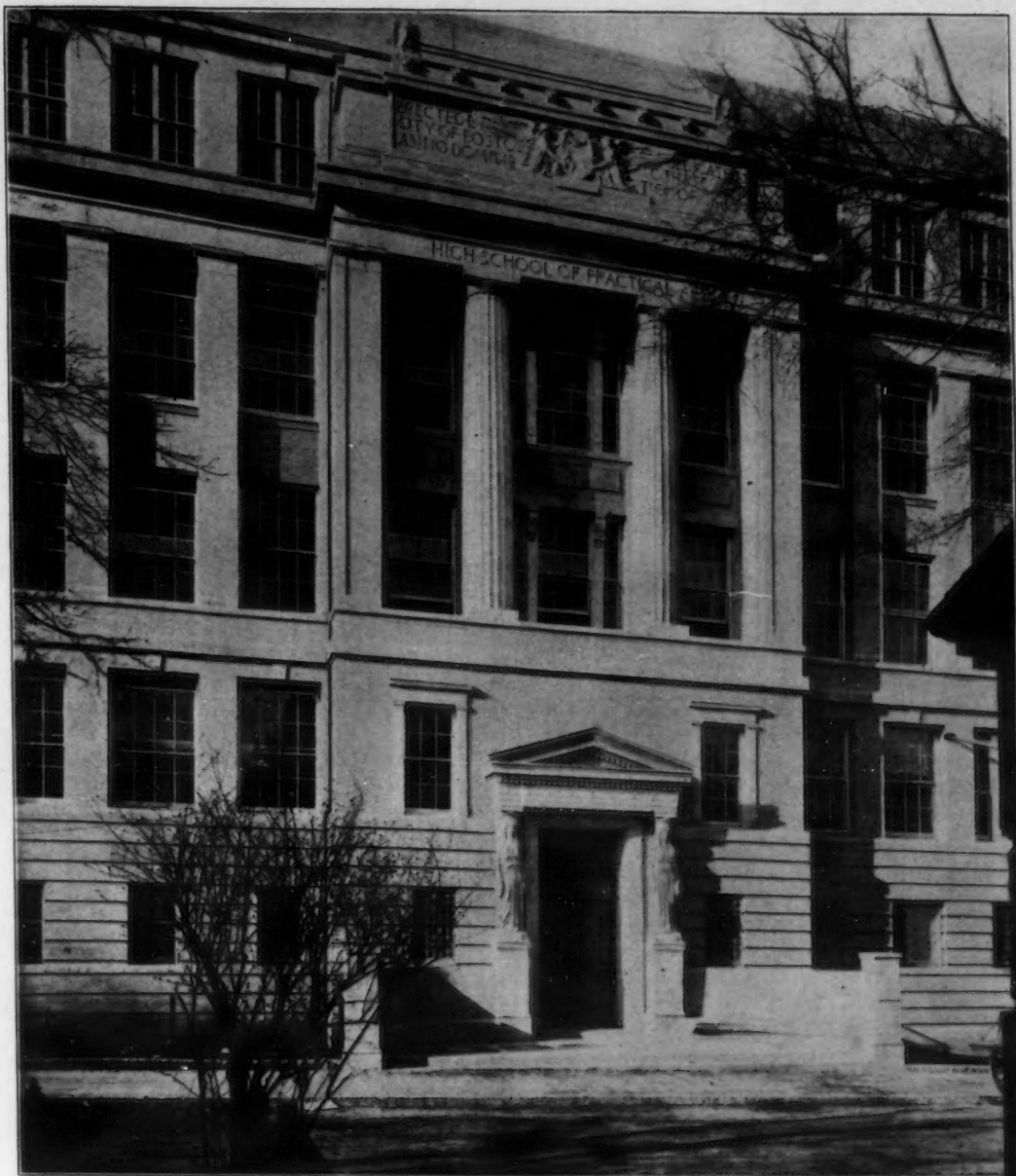
The second floor contains a classroom, a millinery room, six dressmaking and fitting rooms, teachers' room and a large study hall.

The third floor contains five drawing rooms, three kitchens, a metal working room, supply, emergency and storage rooms and a lecture room with a seating capacity for 142 persons.

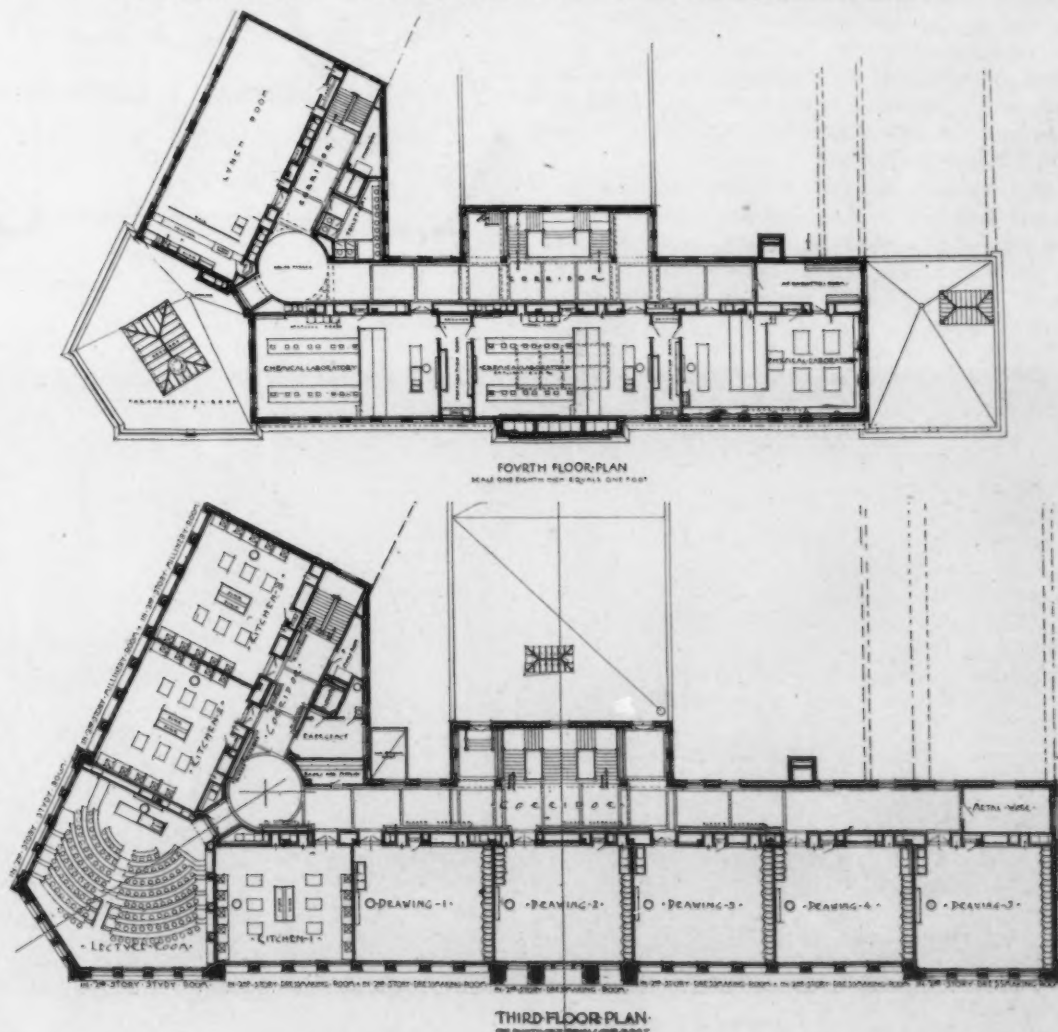
The fourth floor contains two large chemical and one physical laboratory, with two preparation rooms, an apparatus room, toilet and storage rooms and a large lunch room.

An electric elevator runs from the basement to the fourth floor.

The building contains a plenum system of ventilation, fresh air being supplied to the assembly hall by an electrically driven fan. The fresh air for the rest of the building is furnished by two steel plate fans driven by a low-pressure steam engine. In each case, the air is first heated in a primary stack by indirect radiators to a temperature of 68 degrees. Mixing dampers, controlled automatically by thermostats with graduated action, and located in the fresh-air duct, maintain the temperature



CENTRAL PAVILION, HIGH SCHOOL OF PRACTICAL ARTS, BOSTON, MASS.





A COOKING ROOM.



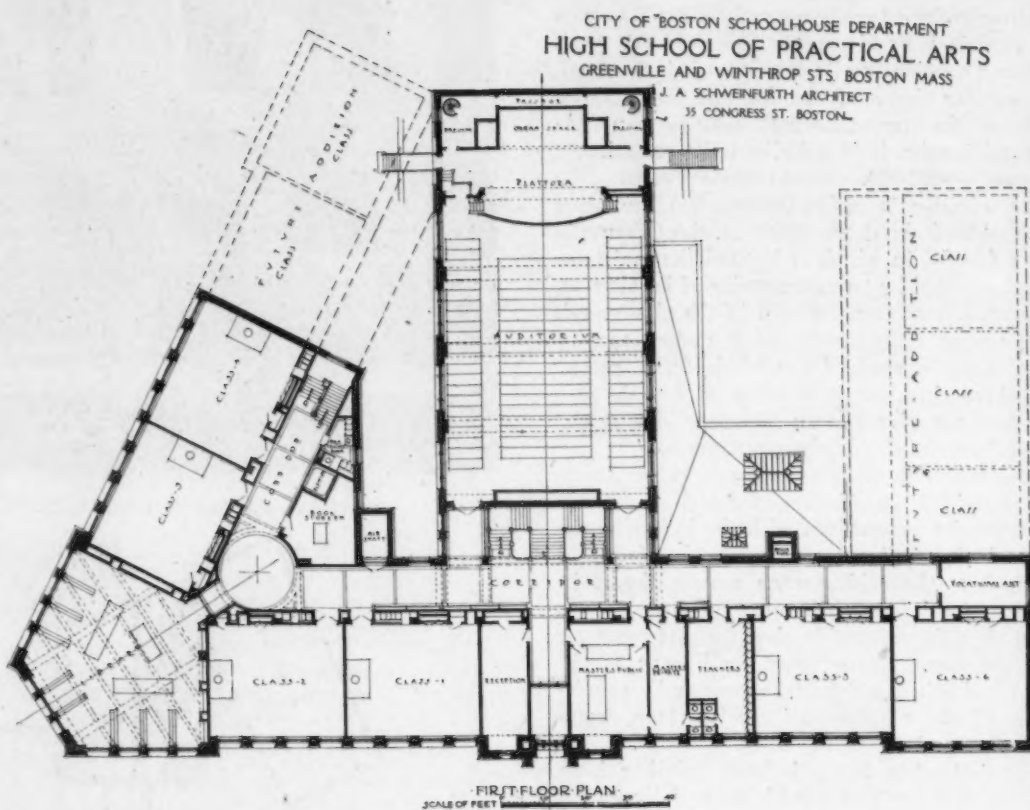
A SEWING ROOM.

of the air uniformly. The main air duct to the classrooms and gymnasium is of concrete and is located below the ground-floor corridor. The building is warmed by direct radiators and the apparatus is so arranged that the assembly hall may be heated and ventilated independently of the classrooms.

The toilet fixtures in the entire building are of the latest school type prescribed by the schoolhouse commission. All fixtures in the basement have outlets for seat ventilation which are connected together by galvanized iron ducts and run to the top of the main ventilators. The individual fixtures thruout the building have similar vents. Ventilation is assisted by aspirating coils in the flues.

The electrical installations consist of complete electric lighting and power for the projection lanterns in the assembly hall, the laboratories and locker rooms, electrical heating devices in the sewing and millinery rooms, intercommunicating telephones, an electric program and clock system, local and auxiliary fire alarm system and a vacuum clearing system. Gas is supplied for emergency lighting, for cooking and for laboratory work.

The school is designed to teach girls the domestic arts and all that pertains thereto, and is the largest and most important building built by the Boston Schoolhouse Department in many years. The architect is Mr. J. A. Schweinfurth, Boston, Mass.



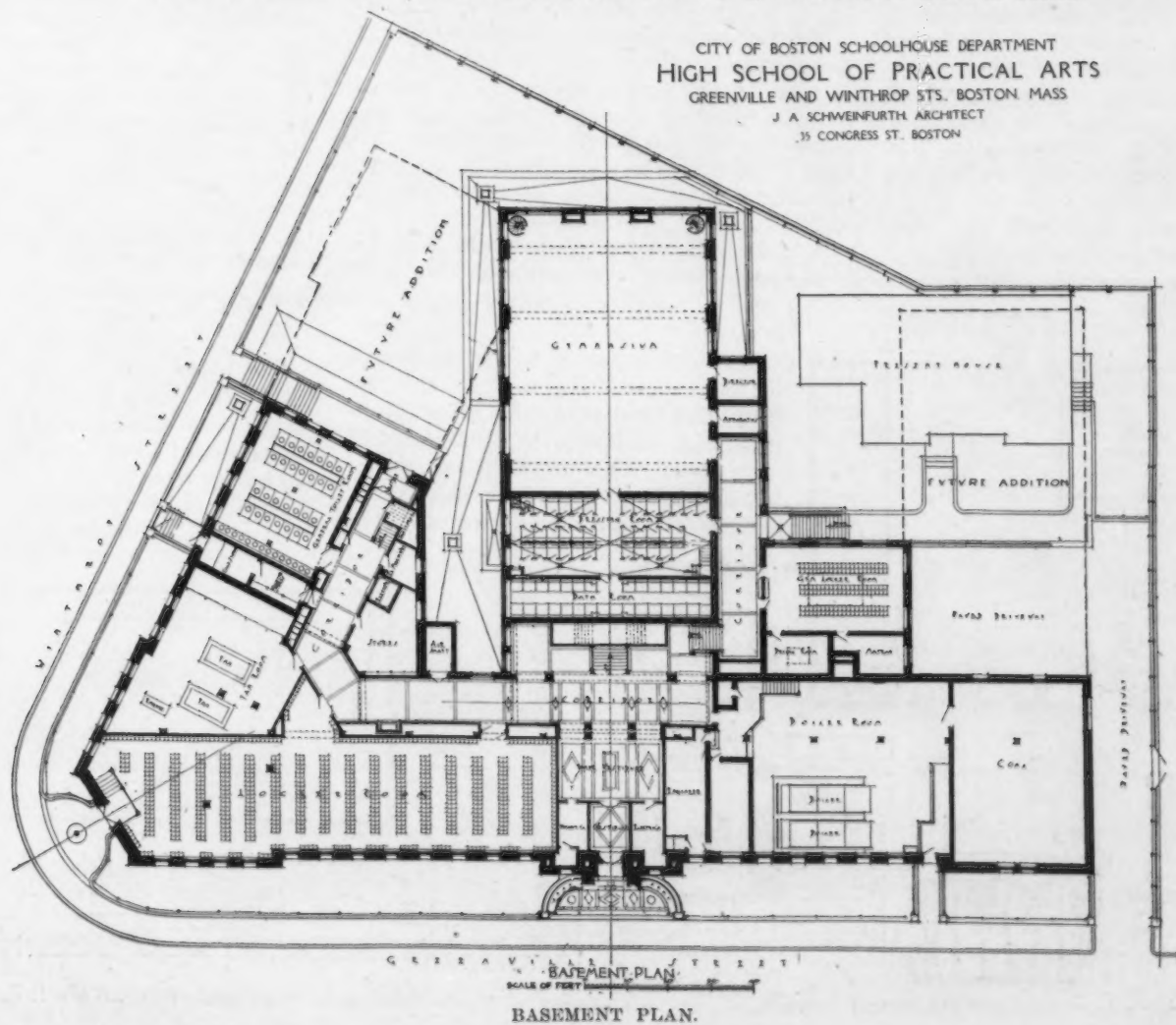
ASSEMBLY ROOM.

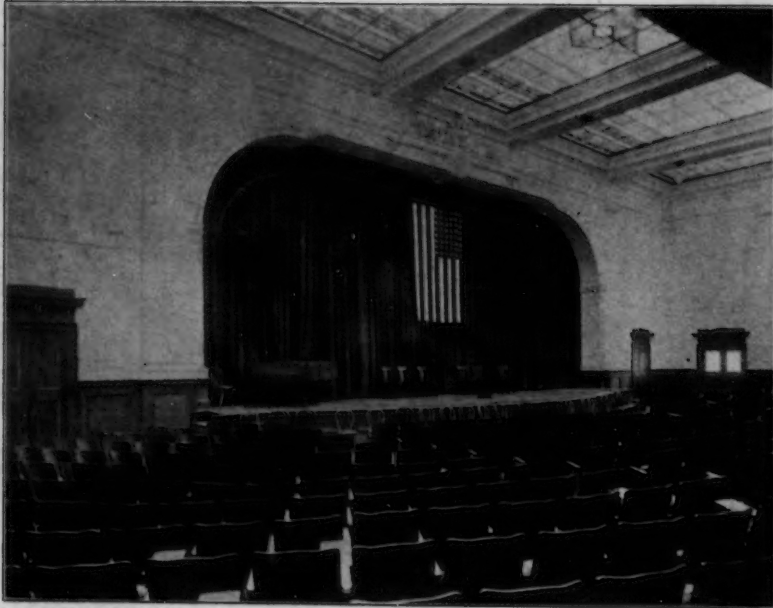


PHYSICAL LABORATORY.



HIGH SCHOOL OF PRACTICAL ARTS, BOSTON, MASS. J. A. Schweinfurth, Architect, Boston.





AUDITORIUM, BLOOMFIELD HIGH SCHOOL.

THE BLOOMFIELD, N. J., HIGH SCHOOL.

A recent commentator on school architecture declares that the modern schoolhouse is the most accurate reflection of our complex modern educational systems and that when compared with the earliest classrooms on the steps of a Greek temple it conveys a better idea than a lengthy treatise, of the evolution in educational ideas, processes and tools which has taken place. He might have well added that the schoolhouse also mirrors the growth of social and political ideals and the marvelous advances of the mechanical and sanitary sciences and the wide-spread appreciation for the best art of the architect.

A high-school building that is a typical example of the evolution of the modern American school, in a small community, is the Bloomfield High School at Bloomfield, N. J. The building houses a complete high school preparing students for college and for commercial as well as industrial positions.

The building is located at the intersection of two main thoroughfares and is 171 feet 2 inches across the front by 123 feet 6 inches deep.

The sill course and front stoop are of granite, the basement of limestone, and the parts above are limestone, buff brick, and terra cotta. The interior and exterior constructional walls of the building are of brick.

The building has a basement and four stories. The basement is 11 feet high, and each of the stories is 13 feet high.

The Basement.

The basement contains a lathe room, bench room, lumber room, mechanical draughting room, an extra room for manual-training work, an office for the director of manual training, an exhibit room, two offices for supervisors of instruction, large boiler and coal rooms, bicycle rooms for boys and girls, three large supply rooms, locker rooms for boys' and girls' clothing, two rooms for the fans and motors for the heating and ventilating system, two rooms for the janitor, an electric transformer room, a main switchboard room and storage closets.

The lathe room is fitted up with twelve speed lathes for pupils and one lathe for the instructor, with space for eight additional lathes for the pupils. These lathes are arranged in three sets of four each, all run by electric motors. The bench room is equipped with 24 work benches, and the drafting room with 24 drafting tables.

The Main Floor.

The first story contains an assembly room, 58 feet by 90 feet, with a stage 24 feet by 55 feet in addition, and a large gallery. The assembly room, exclusive of stage, is fitted up with opera chairs and will seat one thousand people. This room is to be used as a study hall by the pupils in addition to its use as an assembly room, and for this purpose each alternate chair is fitted with a steel sliding tablet arm. On each side of the stage there are two ante-rooms which are also to be used as offices for the instructors.

The main entrance to the building is in the center of the front in the first story, and consists of three arched doorways, each six feet wide, opening into a large barrel vault vestibule and thence into the main corridor, from which opens the assembly room directly opposite. The

main corridor runs north and south, from end to end of the building, with the girls' staircase at the south end and the boys' staircase at the north end. At the right hand of the main vestibule is a reception room, opening out from that is the board room, 24 feet by 30 feet, and connected with the board room is a vault ten feet square with regulation steel vestibule doors, etc., and combination lock.

On the north end of the first story front is a draughting room, 24 feet by 30 feet, equipped with 24 draughting tables, which is used for the present, as an eighth grade draughting room. Opposite this room at the northwest corner is the high-school draughting room, which is also equipped with twenty-four tables. Adjoining on the left hand, or the south side of the main vestibule, is the principal's office, with an ante-room which opens to the main corridor.

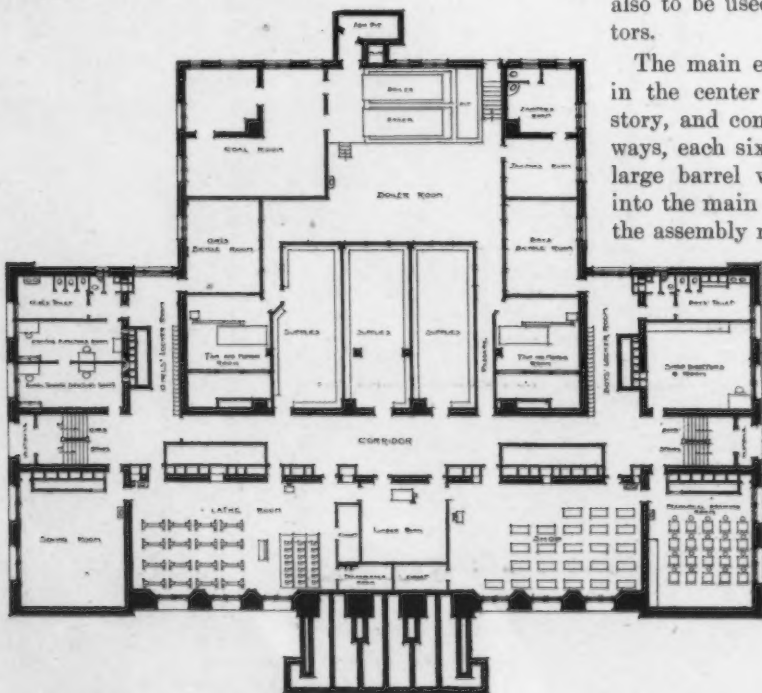
Next adjoining the principal's rooms to the south is the domestic science department, which consists, first, of a dining room 20 feet by 24 feet; second, a pantry, and, third, a kitchen. These rooms have been fitted up for their special use, the pantry containing a refrigerator, and the kitchen containing twelve tables equipped with gas stoves, each table accommodating two pupils.

On the southwest corner on the opposite side of the main corridor from the kitchen, is a classroom, 24 feet by 30 feet. Opening out from the main corridor to the rear, on each side of the assembly room, is a teachers' room, 12 feet by 30 feet, the northerly room for men teachers and the southerly one for women teachers, having lockers for all the teachers in the building.

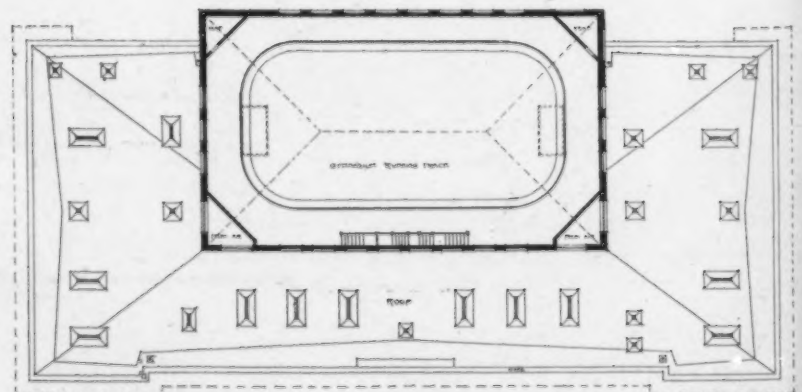
The Second Story.

The second story has seven classrooms, ranging in size from 20 feet by 24 feet up to 24 feet by 36 feet. The gallery of the assembly room

(Concluded on Page 68)



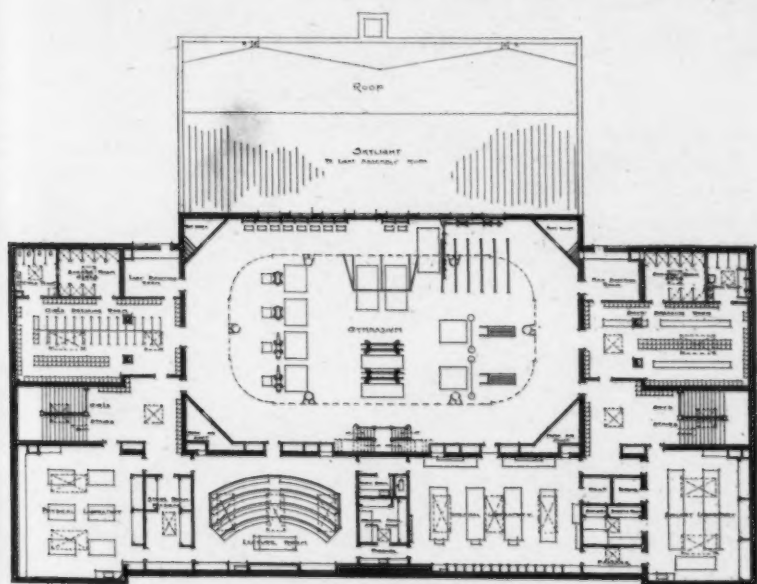
BASEMENT PLAN, BLOOMFIELD HIGH SCHOOL.



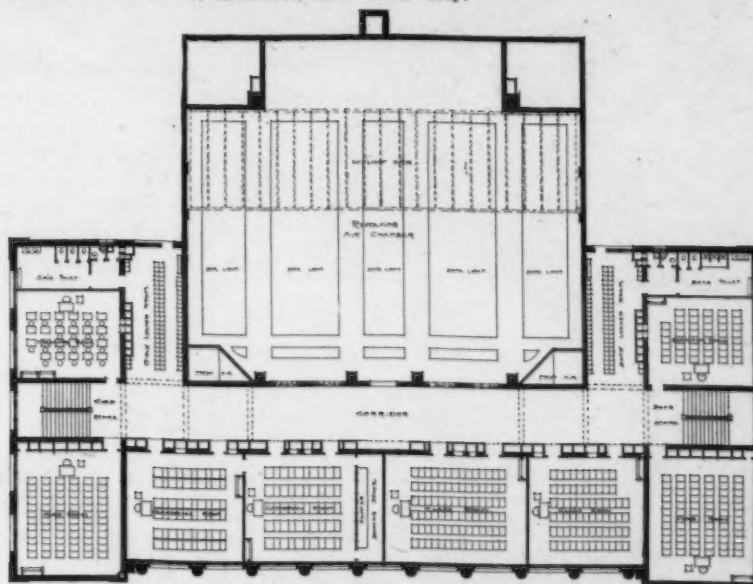
FIFTH FLOOR PLAN, BLOOMFIELD HIGH SCHOOL.



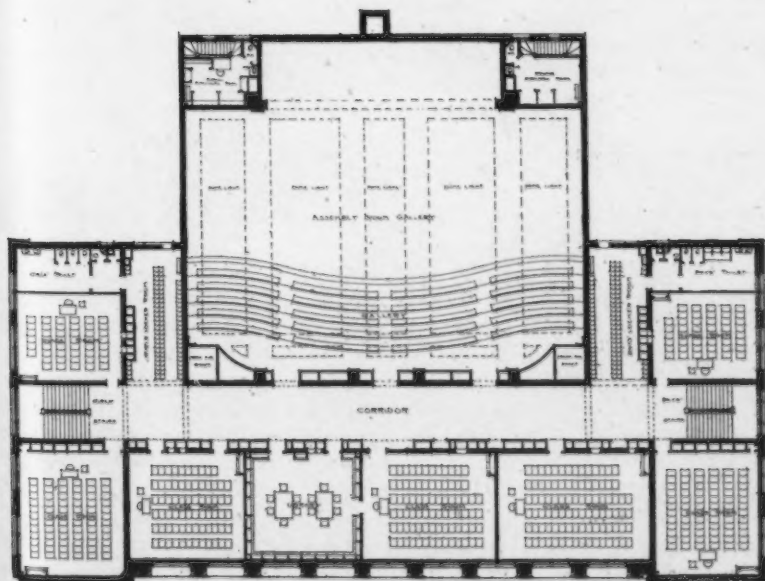
BLOOMFIELD HIGH SCHOOL, BLOOMFIELD, N. J. C. Granville Jones, Architect, New York City.



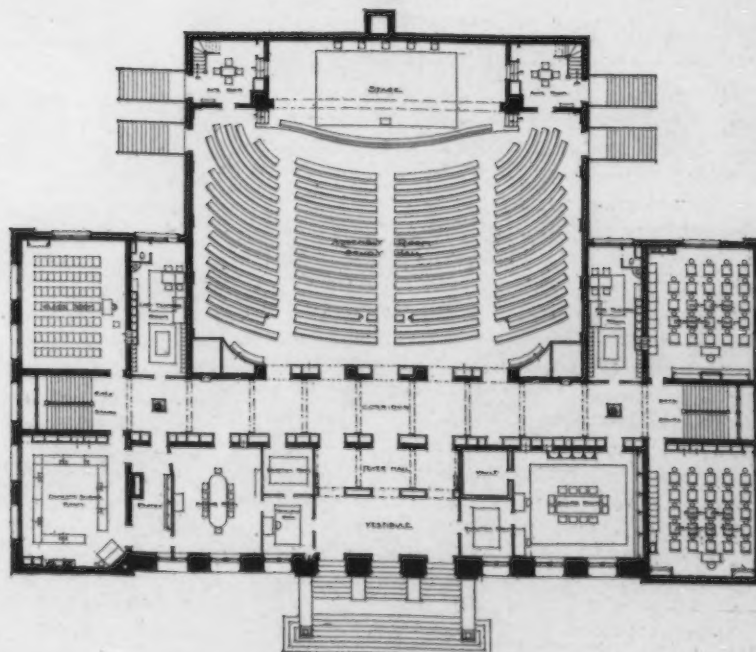
FOURTH FLOOR PLAN.



THIRD FLOOR PLAN.

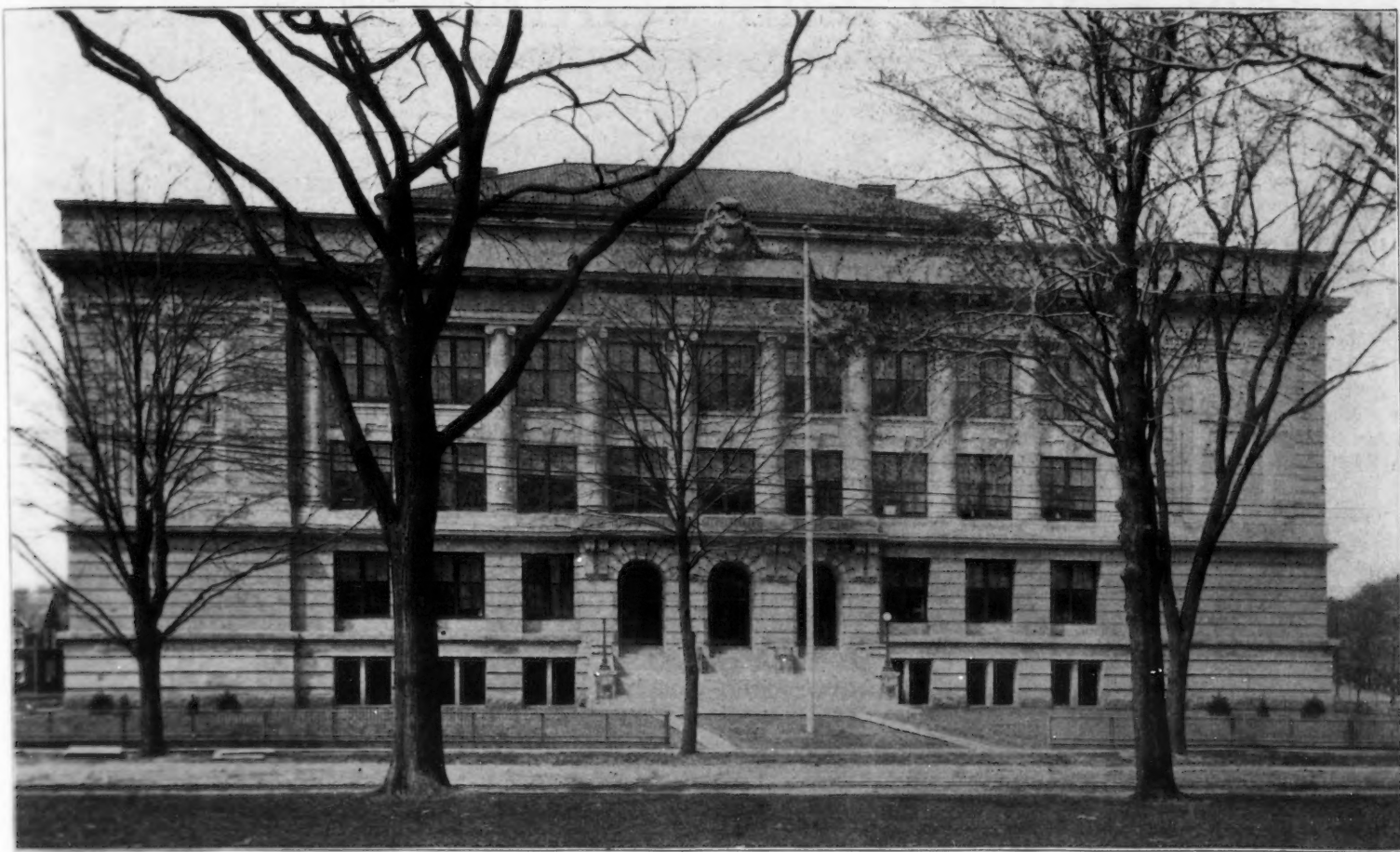


SECOND FLOOR PLAN.

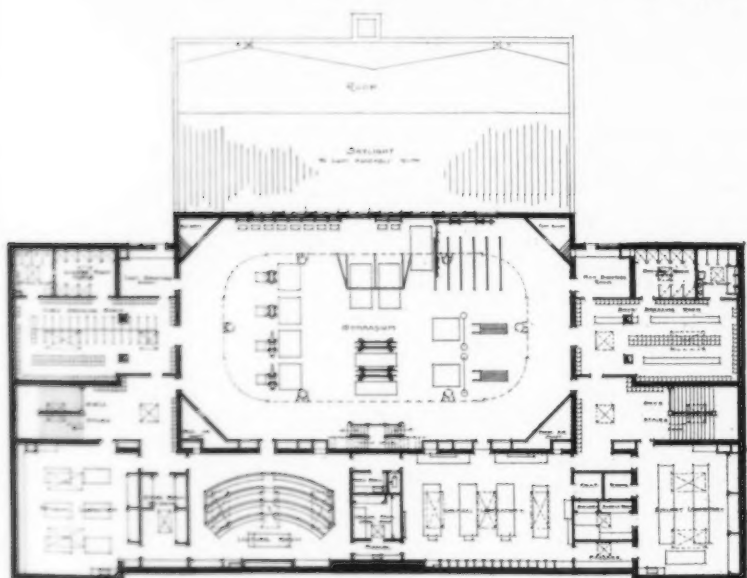


FIRST FLOOR PLAN.

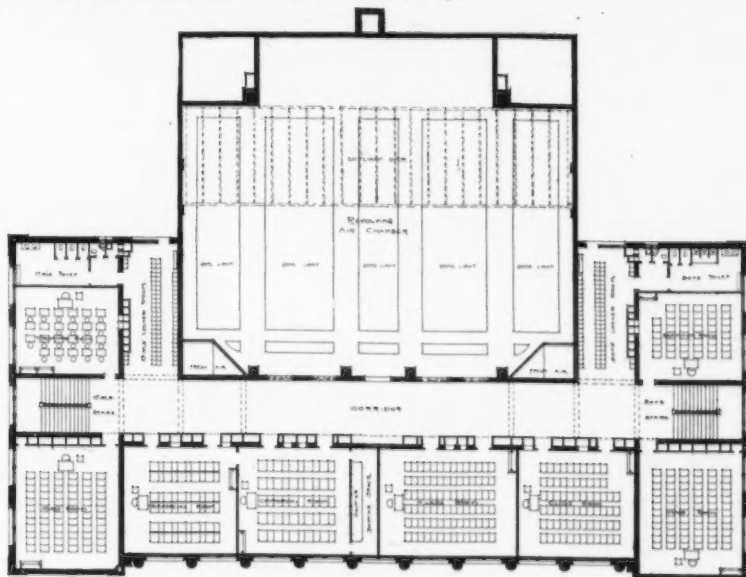
FLOOR PLANS, BLOOMFIELD HIGH SCHOOL, BLOOMFIELD, N. J.



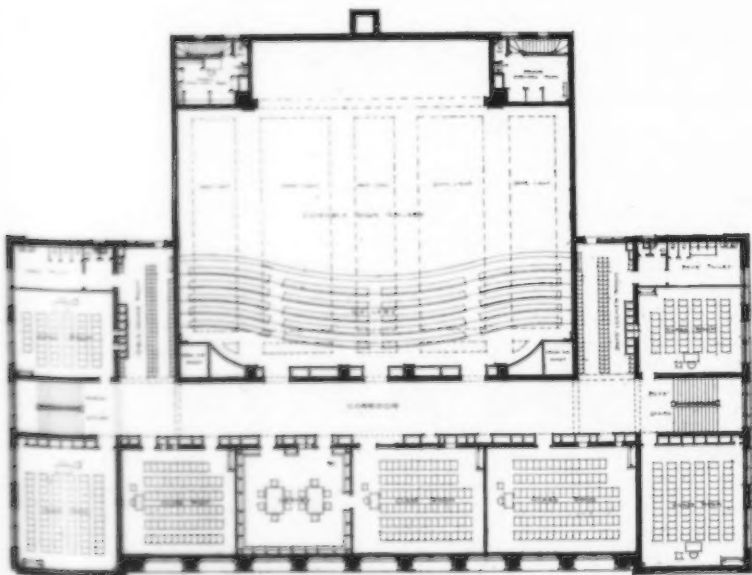
BLOOMFIELD HIGH SCHOOL, BLOOMFIELD, N. J. C. Granville Jones, Architect, New York City.



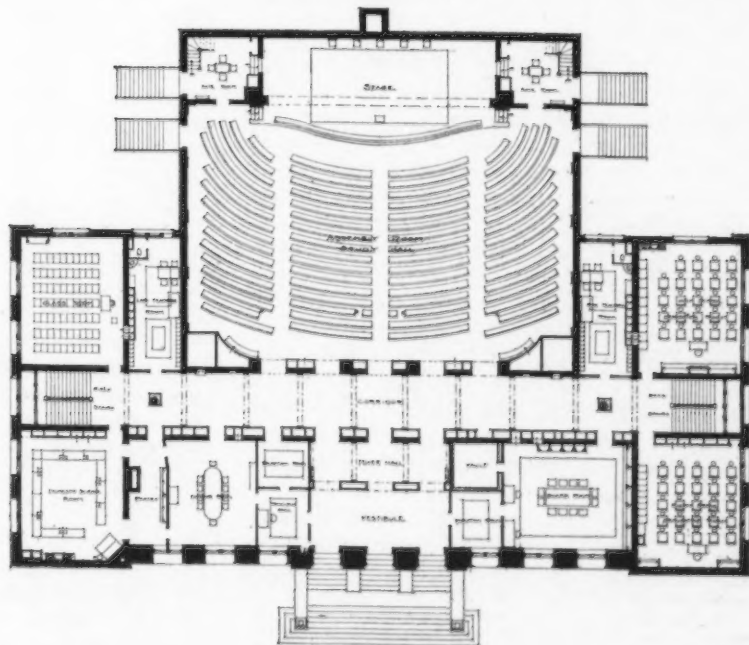
FOURTH FLOOR PLAN.



THIRD FLOOR PLAN.



SECOND FLOOR PLAN.



FIRST FLOOR PLAN.

FLOOR PLANS, BLOOMFIELD HIGH SCHOOL, BLOOMFIELD, N. J.

School Heating and Ventilating Problems

By SAMUEL R. LEWIS, President, American Society of Heating and Ventilating Engineers

Nature apparently intended human beings to live outdoors. Living in houses, working in enclosed places, sleeping under roofs enclosed by walls, are unnatural conditions. No stronger testimony of this can be rendered than the experience which most of us have had of difficulty in sleeping indoors after having become accustomed to outdoor sleeping. That the change from outdoor to indoor life is one which requires considerable readjustment is evidenced by the rapid degeneration physically of aboriginal races when civilized into indoor life and by the short time simians live when confined in indoor cages.

In this connection Cy de Vry, the expert in charge of the animals at the Lincoln Park Zoo in Chicago, had an illuminating experience. The monkeys did not survive a year or more, when kept in ventilated, evenly heated rooms in which an attempt was made to approximate their native climatic conditions. Growing tired of continual losses and replacements, Mr. de Vry determined to experiment with those which appeared nearest to death. So outdoors some of the worst cases went, with merely a shelter against wind and storm, and no artificial heat. And the monkeys picked up, and thrived, and grew fat. Now the same methods are being used with many of the larger animals with generally excellent results.

The nearer we can approximate the outside conditions, then the more healthful will be our houses.

Natural Conditions Necessary.

The outside conditions are wind, breeze, constant movement of air, constant change in temperature and moisture normally of about 70 per cent of all the air will hold. These conditions seem to bring out the greatest human activity, mental and physical. For instance, where it is uniformly hot, or uniformly cold, as in the tropics or the arctics, the highest ideals of human development are not realized. We seem to require flashes of heat and cold to keep us keyed up.

Ventilation and heating are in very many ways inseparable. In some ways they are entirely distinct and separate. The cold winters, many of our occupations, and the idiosyncracies of some individuals, require artificial heating. Since we seem to be most comfortable at a 70 degrees temperature outdoors it has been widely accepted that a 70 degrees temperature indoors is desirable. The comfortable condition indoors depends on other factors than merely the temperature, such as the moisture content and the air movement.

Air and Body Breathing.

The human body has, by a system of evaporation, a most elaborately designed mechanism for heat regulation. The interior bodily temperature cannot be allowed to fluctuate more than a very few degrees without such serious trouble, as fever or chills. So, when we are too cool we do not perspire, and when we are too warm we perspire, the skin moisture absorbing the necessary heat to evaporate from the body, and thus cool the body. When the air is very dry, it absorbs moisture from the body at a high rate; the body is cooled by evaporation and we are uncomfortably cool, and ask for more heat. Thus, a temperature of 75 degrees or higher is comfortable only when the air has twenty to thirty per cent of the moisture it can hold.

When the air is very moist it does not absorb moisture from the skin. The air lying next the skin is saturated with moisture and the body

gets too warm, then how instinctively we seek a breeze. Again, however, when the air is moist and cold, the air lying next the skin is saturated with moisture and this moisture very rapidly absorbs heat from the warm body, as water is an excellent heat conductor. That is why a damp chilly day is so uncomfortable. The air lying against the skin, called the aerial envelope, should be moved away. Tests most elaborately conducted have demonstrated that the hygiene of the body in this particular is comparable in importance with the breathing of proper air. It is even claimed that the condition of the aerial envelope is of greater importance than that of the lung supply, since it has not been demonstrated that air itself is a disease carrier. Diseases seem to be transmitted by dust or by contact. Our resistance to disease is lowered by an improper condition of the air we touch.

In the conditioning of the aerial envelope, air movement, wind and temperature, and moisture and liveness of the air, all bear a part. Heated air seems to be inert, to have lost its vitality—perhaps to be like water, freshly boiled, is to the taste. We seem to thrive better if we do not breathe heated air. Whether the air which has not been heated is better for an aerial envelope has not been definitely proven. Perhaps in heating, air loses some quality which builds up a resistance in the body. In any event, every one knows that unheated air feels better in one's lungs than heated air.

Ideal Conditions Demanded for Schools.

An ideal condition for a schoolroom based on the foregoing observations seems to require:

A temperature varying from 60 degrees to 70 degrees, changing perhaps gradually, but varying sufficiently to keep the body functions stimulated.

A movement of air not sufficient to cause discomfort by drafts, but able to remove continually the aerial envelope, so that the body as well as the lungs may breathe. This will have the effect that, even tho the pupil may be sitting quietly, the air around his body will be moved as tho he were moving moderately, or as tho he were out-of-doors on an ordinary summer day.

A moisture content in the air which varies with the temperature, never less than approximately 40 per cent at 60 degrees and never more, probably, than 50 per cent at 70 degrees.

I have said nothing about the amount of air. This depends on many things aside from its chemical condition. We ventilate in two ways—by dilution, as one clears a bottle of red water by pouring in clear water until the red disappears (an inefficient way) and by displacement, as one pours out the red water, rinses the bottle and then fills with clear water (an efficient way).

The efficiency of either method is governed largely by temperature and construction. Air is one of the most elastic and sensitive substances we know of. Every little hot object sets up its little upward air current, due to the expansion of the air which has received heat, and every cold thing sets up a down current due to the contraction of the air which has lost heat. These currents are little affected by the moisture content or purity of the air. Bad air and smells and dust shoot up and down and about, as easily as fresh, pure air.

Air Currents.

An ordinary room has currents of more or less speed in weather which necessitates artificial heat. At the cold windows there is a downward draft of considerable force. At all exterior walls there is also a downward current,

due to the air having given off its heat to these cooling surfaces, and of necessity contracting and becoming heavier thereby. At all heaters, registers, radiators or lights an upward draft is set in motion due to the fact that the air has absorbed heat and, so has become expanded and lighter. Similarly, there is an up current around all persons, and this is of noticeable volume and speed. An upward current is likewise generally along interior walls, to make up for the displacement or the air which falls from above, due to cooling. There is very little air movement in the room away from the walls or heaters. In a ventilated room where the dilution principle is in force this condition is in effect. It is much intensified since the air is usually introduced near the ceiling and removed at the floor along an interior wall; the air supply nearly all passes down as a film along the outside walls and windows and does not greatly affect the center of the room.

So inefficient is "dilution" ventilation that we require at least thirty cubic feet of air per minute, per occupant, to keep down offensive odors, to insure reasonable comfort and to maintain a reasonable percentage of unbreathed air supplied to each occupant. This is a fact even tho a normal adult breathes in a minute less than a cubic foot of air. (400 cubic inches.)

"Displacement" ventilation is only practicable where there are no surfaces, so much warmer or cooler than the general temperature of the room, as to create the above described local currents, so prohibitive of economical and effective ventilation.

Displacement Ventilation.

Displacement ventilation can be effectively introduced into rooms which do not have much outside exposure, or in which the exposure is well insulated, the windows air tight and double, etc. Such rooms do not require local heaters such as radiators or stoves. In such rooms the incoming air for ventilation needs to be very little warmer than the temperature desired to be maintained. At present, practically the only examples of such ventilated rooms are some theaters and some restaurants. Displacement ventilation, with the air introduced under each seat passing upward slowly to outlets in the ceiling is successfully in operation today in many theaters. Much less air per occupant, per unit of time, perhaps as much as two-thirds less, is required to maintain the same purity and sweetness and comfort by this method than by "dilution" ventilation. In making this statement I am not considering the chemical condition of the air.

Where the structural conditions as in some interior rooms are such that there is no cold outside wall or glass surface, displacement ventilation with the air introduced on one side of a room and removed from the other is equally efficient. It seems to matter little whether the inlets and outlets are high up or low down, the idea is to move bodily the entire volume across the room.

Ventilation and Leakage.

Where artificial ventilation is in effect, as a rule, the lower the ceiling the more effective will be the ventilation. Where heating cost is to be considered, as a rule, the lower the ceiling the more economically may the rooms be heated. The reasons for this are that any given volume of air when warmer than the surrounding air becomes expanded and lighter than the surrounding air, and a heated room or a heated building becomes in effect a hot air balloon, the pressure of the heated air tending to leak in at the lower part of the room.

Hot air leaks out at the top of a window,

NOTE—This paper constituted the basis of an address on Ventilation delivered by Mr. Lewis before the School Board Section of the Wisconsin Teachers' Association, November 7, 1913. Its author is a leading ventilating authority.—Editor.

cold air leaks in at the bottom of a window. The warmest air is at the top and the farther from the top the occupants are the less of the heat they will get. The rate of transmission of heat from a hotter to a cooler substance varies within the limits with which we have to deal, with the difference in temperature between the hotter and cooler bodies, so that in a high room the heat loss to the outside from the hot upper part is more rapid than it would be with a low ceiling and lower temperature there.

Considerations of illumination rather than of ventilation should be the limiting factor in ceiling height. Every inch of space between the ceiling and the necessary height of the windows is a handicap and a loss both in construction and maintenance.

When the outside walls are well furred or insulated, and the windows are tight and double, ventilation by displacement is practicable and efficient. As the most of our houses are built today, neither the heating nor the ventilation is or can be economical or efficient. When you store water in a leaky tank, do you keep the pump running in an attempt to pump in more

than leaks out? Obviously, you stop the leaks. Yet, in heating houses and schools, you burn coal, oil, gas recklessly and extravagantly, robbing your descendants of their fair heritage, stopping no leaks, but instead, keep running the pump faster as the tank gets older and leaks more.

We build cheap and efficient ice houses which keep the heat out for months. We build, right in Wisconsin, for instance, cranberry warehouses in which so effective is the cheap and common insulation that one or two oil lamps will prevent several thousand barrels of berries from freezing during the most extreme weather.

We have all observed thick-walled houses to be cool in summer and warm in winter, but we have not taken the lesson to heart.

It is along lines of better construction of buildings as to insulation that the hopes of the future for heating and ventilation extends. Remember that when we eliminate the cause of objectionable local currents, which are cold local surfaces and hot local surfaces, we can ventilate by displacement.

Ventilation by Recirculation.

An agitation is at present in force regarding the use of recirculated air. Its advocates take cognizance only of the factors of temperature, movement and moisture. They discount the possibility of toxic content in expired air and hold that inevitable leakage will offset or compensate against all such contamination or loss in value, *provided* that the air is recirculated constantly thru proper air washers or purifiers, is kept in motion and is properly moist.

In favor of recirculation, some of the arguments are that an outside source of air is likely to be dust polluted, or contaminated in other ways, and that there is a fuel saving in not having to heat cold, outside air. The recirculated air is returned to the fans at a temperature considerably higher than that often existing outdoors, and is only dirty from what it has picked up in the building since its last washing. The returned air will be generally more moist than fresh air, permitting a saving in fuel, for it takes fuel to perform the work of vaporizing moisture and mixing it with the air.

(Concluded on Page 56)

Some Suggestions Relative to Country Schoolhouses

By FLETCHER B. DRESSLAR, Specialist in School Hygiene, United States Bureau of Education

Despite the fact that more than half of the school children of our nation receive their training in the rural schools, the country schoolhouse has been given very little serious attention. Various investigations recently made show conclusively that a very large percentage of these buildings are no better adapted to meet the educational needs of the children than they were a half century ago. The extraordinary growth of our cities both in population and wealth has made it both necessary and possible to spend large sums of money on city school buildings. As a result school architecture in the cities has shown remarkable development, and, while comparisons are generally odious and often unfairly made, it is perfectly safe to say that our best city school buildings are the best in the world. But it is equally certain that we can take no such pride in the buildings we are furnishing to the rural communities. Any one who will take the time to find out the present condition of these buildings will at once realize that it is high time for us to enter upon this phase of our educational development with a great deal more earnestness and definiteness of purpose.

It may be of some interest to discuss briefly at this time the following question: What general ideals should we strive for in the construction of country schoolhouses?

Possibly no one is wise enough to answer this question with complete satisfaction to any one, simply because nobody can see far enough ahead to know in all particulars what educational demands country life, a generation hence, will make on its leaders. There are however, a few important elements which must enter into the answer to this question, and we wish to direct the reader's attention to a brief statement of these.

The time has passed for the construction of one-room schoolhouses. There will be need for a long time to come for the construction of one-teacher rural schoolhouses, but these must have more than one room. The designation of one, two, or three-room schoolhouses should be discarded from educational discussions, and instead they should be spoken of as one-teacher, two-teacher, three-teacher schools. The definite point we wish to emphasize is this: A modern country school program cannot be successfully managed in a one-room structure. We submit that

every rural school which has a right to exist, needs an unobstructed classroom, two cloak rooms, a library room, and one or two work rooms.

The classroom should be free from the domination of a stove hoist in the middle of the room. It is curious to note how much influence the habit or custom of locating an old box stove in the middle of the classroom has had on the size and form of the rural schoolhouses of our country. Because stoves of this variety so situated drove the children out of nearly a third of the best space in the room, naturally these buildings were built to furnish usable space for the children. In order to realize fully just what this has meant, it is almost necessary to take such a room, remove the stove from its accustomed place, install a jacketed stove in a corner, or in a niche in the wall, and rearrange the desks. One will then see what a striking change has been wrought.

Likewise the classroom should be relieved of the necessity of serving as a wardrobe for wraps, or as a pantry for receiving dinner pails, and the other adventitious belongings of the children. In short the classroom of a rural school should be as compact and tidy as a classroom in our best city schools. A classroom thus freed from the clutter of wraps and all the other usual impediments, does not need to be large. A room twenty-feet wide and twenty-four feet long is ample for the accommodation of twenty-five to thirty pupils, and this number is above the average attendance in the rural schools, taking the country as a whole. In a room of this size the difficulties of management will be lessened, the children will see and hear more easily, and the problems of lighting, heating, and ventilation can be more easily solved.

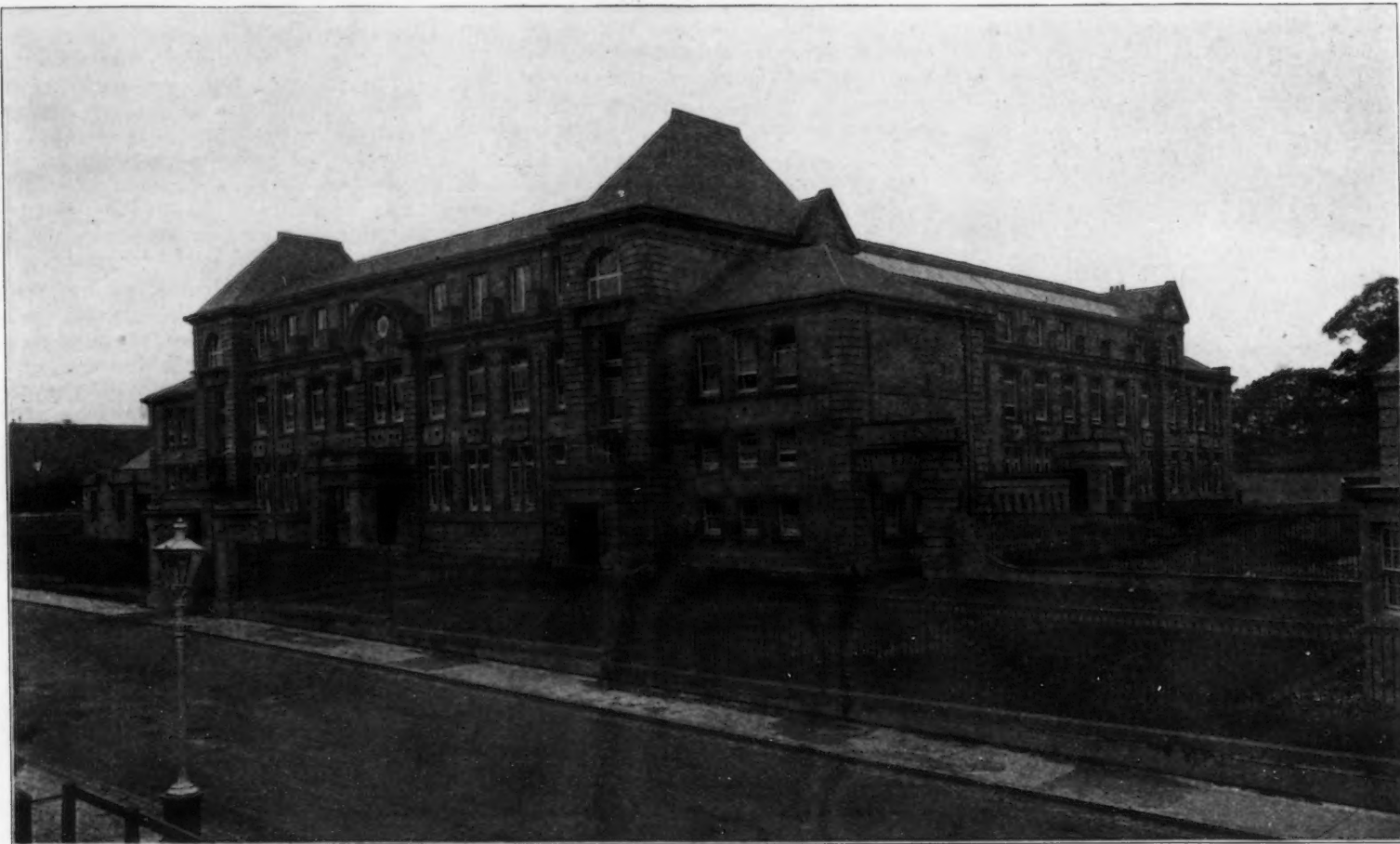
Cloak rooms are a necessity from every point of view, and no county superintendent should permit the erection of a country schoolhouse which does not provide them. It is always better to have two separate cloak rooms, but one room, if properly placed, carefully furnished with hooks and receptacles, and intelligently supervised will often suffice. Country schools deserve these conveniences, and in the future must have them.

The next element in importance is a library room, tho this room is at present found in none but the most modern buildings. Someone

may ask the question: "Why insist on a library room? Will not a few book-cases built in the classroom accommodate all the books, and at the same time render them more convenient to the children?" We want to insist on a library room for the following reasons: Such a room will furnish a quieter place for the older students to consult reference books, and in which to do some real studying, and thus furnish an inviting retreat from the humdrum. Here books can be consulted without distracting the attention of the children engaged in recitation work, and above all this room will be dedicated to books, and to their thoughtful use not only by the older pupils of the school, but by the members of the community not in school. This library room will be of great importance simply because it is a library room, and will make an appeal impossible to create without it. Any teacher with a modicum of originality and professional imagination will readily catch my meaning. It should be the most inviting and carefully furnished room in the building even tho it be small. Into it all the reference books can be gathered and as a result practically all the dusty book shelves eliminated from the classroom. This library room will also serve for the teacher's office, where consultations may be held with patrons or with school officers. All who know something of the psychological influence of a quiet, neat, and dignified place for such conferences, will understand the incidental value here suggested.

The time has come in our rural school work to teach children how to do manual work, how to institute experiments, and how to get valuable information from their own direct observations. Work rooms are now important adjuncts and in fact are necessary, to meet in a satisfactory manner the full demands of rural education. We therefore need two work rooms, one for boys and one for girls. Of course in a school with a small enrollment it is possible to make one room serve both, but the difficulties incident to the management of both lines of work in one room are very great.

The above brief suggestions have been made with the hope that they will be taken seriously by officers in charge of country schools, for extensive correspondence with those seeking help has made clear the need of some definite ideals toward which to work.



HAMILTON ACADEMY.
Messrs. Cullen, Lockhead & Brown, Architects, Glasgow.

AN INTERESTING GROUP OF SCHOOLS

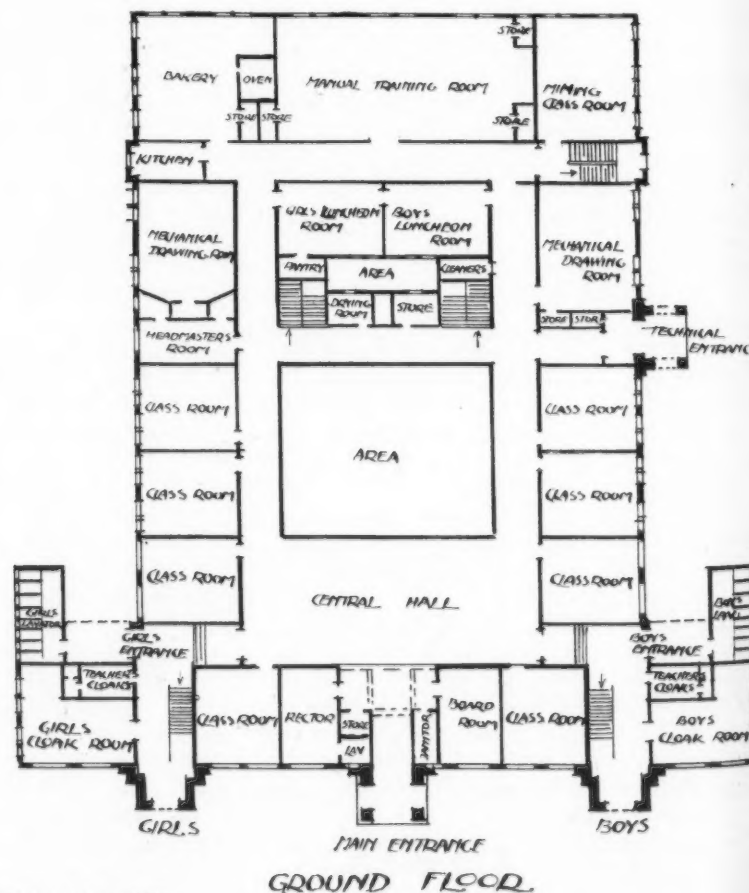
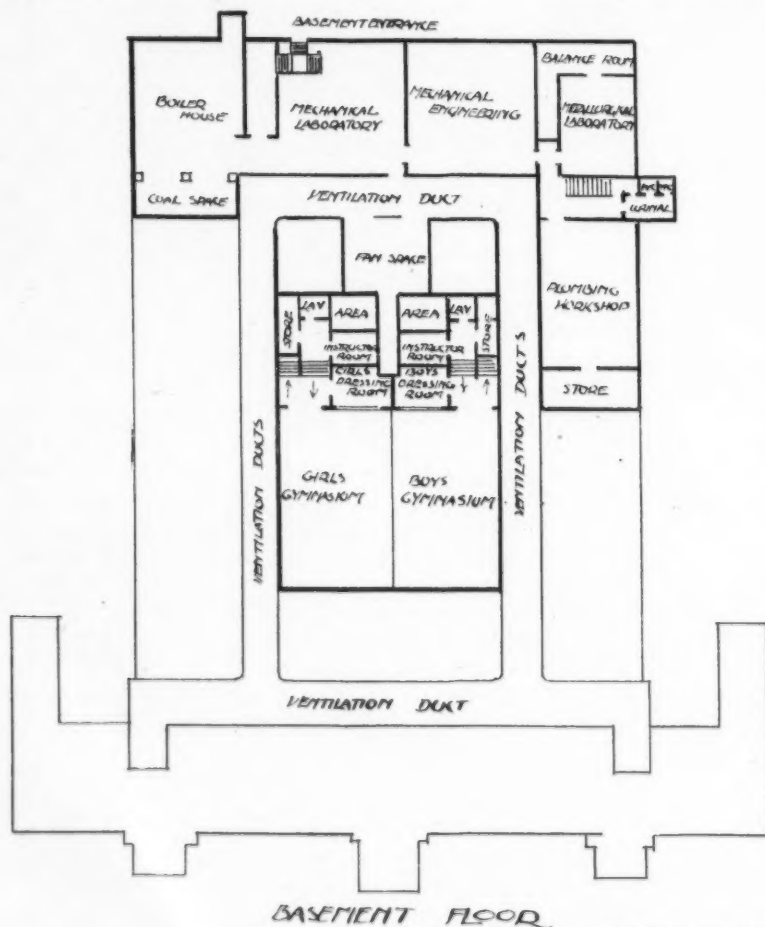
By JOHN Y. DUNLOP, Craighead, Tollcross, Scotland

The handsome new academy, erected by the Hamilton school board, and which cost with equipment £53,000, was opened at the end of September, 1913. The main building, which is built of red sandstone, has three front entrances, the main door in the center and the boys' and girls' entrances at the north and south ends of the facade respectively.

From the main entrance, direct access is obtained to the entrance hall, with the Rector's room and library on either side and janitor's room adjoining, thence to the central hall. The latter is also approached from the boys' and girls' entrances with their respective staircases leading to the upper floors, and the pupils and teachers' cloakrooms immediately adjacent.

The central hall, with its gallery overhead extending around three sides, communicates directly with a wide internal corridor on each floor running around the building. It gives access to the various classrooms, and is intersected midway by a transverse corridor having auxiliary staircases.

The building is three stories high, with a



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PRIMARY SCHOOL, HAMILTON ACADEMY.

basement in addition, and in general arrangement provides for ordinary classrooms to the front and for technical classrooms with separate outside entrance to the rear and art rooms on the upper floor.

The central hall is, perhaps, the most important architectural feature in the building and is for use on special occasions such as the presentation of prizes and general assemblages of students. It extends thru two stories and has a lofty arched ceiling, with modeled and molded plaster work, the lower walls being paneled with wood. It is lighted by six large windows, each having leaded and stained glass with figures representing literature, science, art, music, technology and gymnastics.

The classrooms, of which there are 23, provide accommodations for 682 pupils. They are

furnished with single desks and chairs and are of two types, for 24 and 30 pupils respectively.

The gymnasium is arranged in one of the basements, with separate access for boys and girls with respect to dressing rooms, lavatories and instruction rooms, and is capable of being turned into two by means of a folding partition. The apparatus is of the most modern description.

The lecture hall is situated on the first floor, at the rear of the building, and is a lofty room arranged in gallery fashion to accommodate 200 pupils. It is fully equipped for lecture purposes, with complete apparatus for lantern and demonstration work. It communicates directly with the laboratories.

The laboratories, of which there are six, comprise senior and junior chemical, senior and junior physical, botanical and electrical labora-

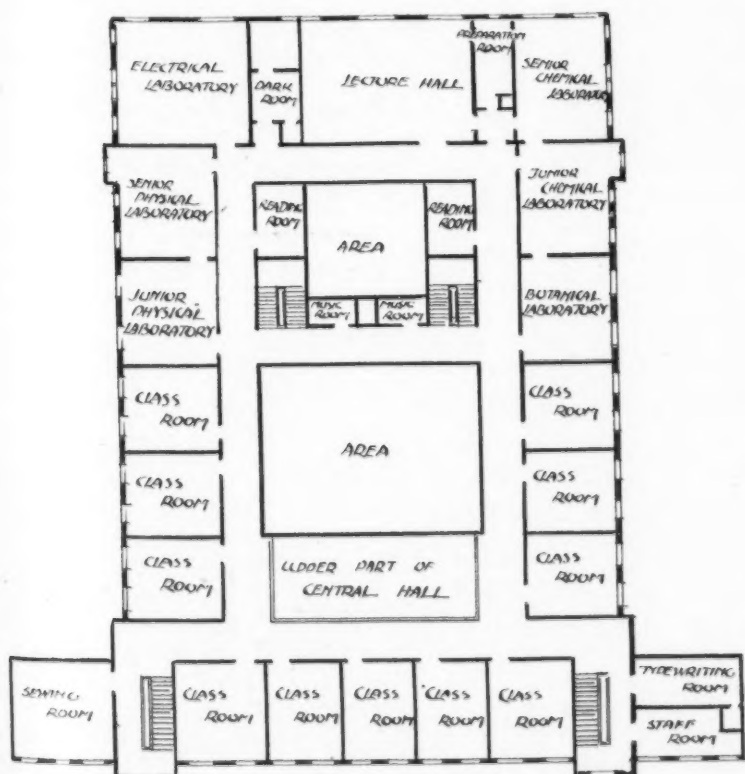
tories, with photographic dark room and printing room.

The manual training room is one of the largest of its kind. It contains benches and tables for 30 boys at woodwork, fifteen at metalwork, twelve at bookbinding and 60 at cardboard modeling. The complete installation of woodwork and metalwork machinery is driven by electric power.

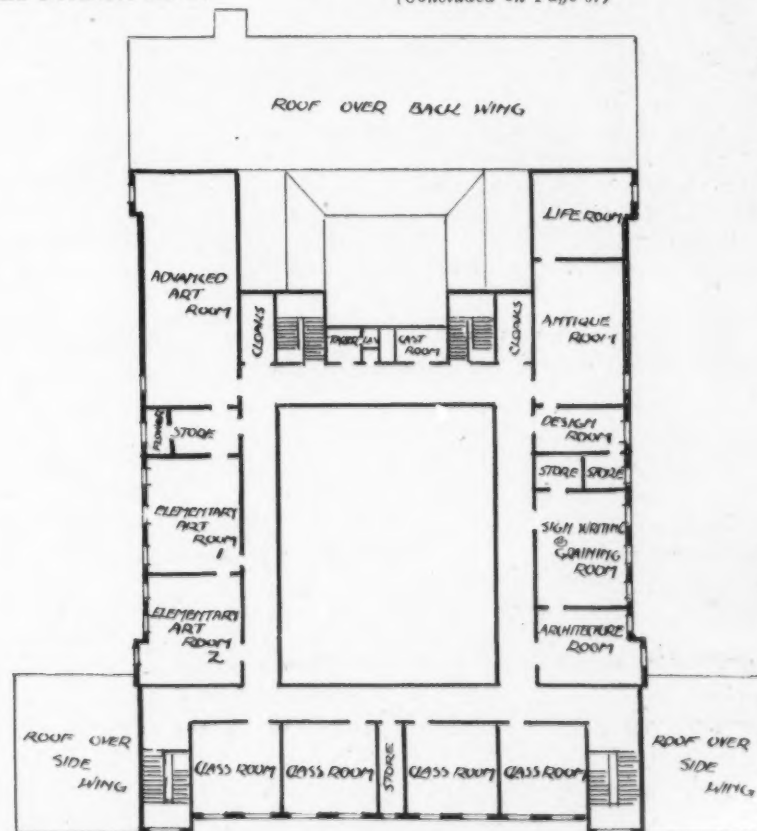
The mining classroom and metallurgical laboratories and balance rooms have been arranged on the most direct lines, special attention having been directed to those important subjects by introducing testing apparatus, mixing appliances and metallurgical apparatus.

The engineering laboratory, metal workshop and plumbers' workshop are located in the basement, arranged, lighted and equipped for the

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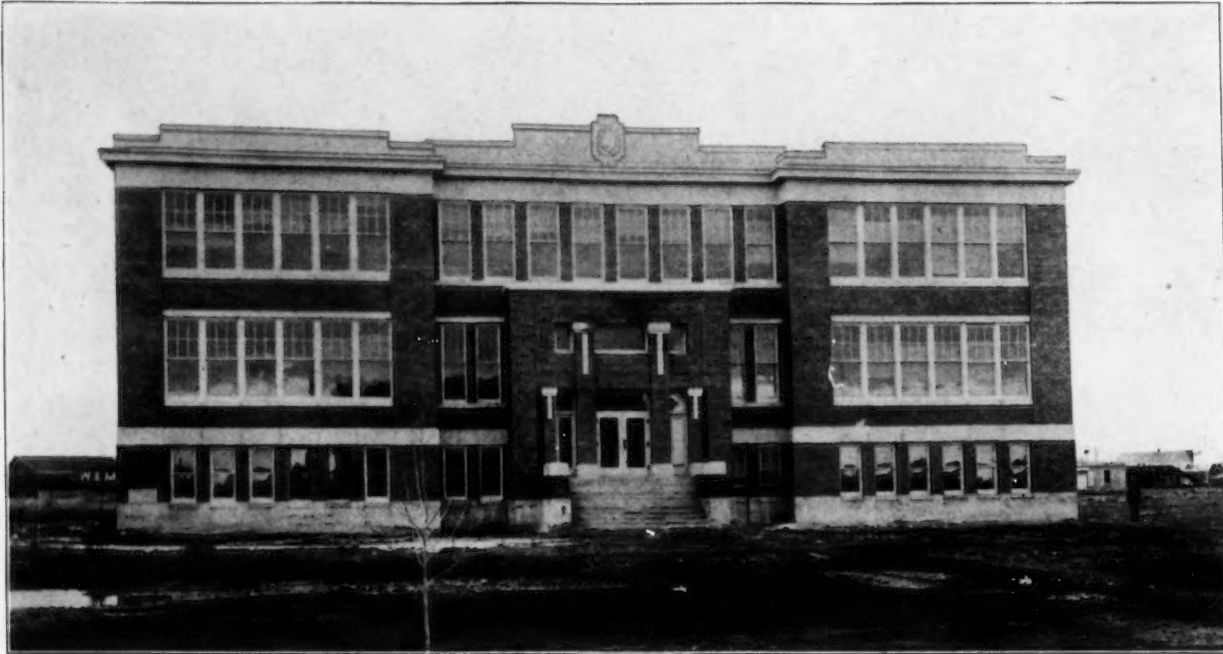


FIRST FLOOR



SECOND FLOOR

FLOOR PLANS, HAMILTON ACADEMY.



RUPERT HIGH SCHOOL, RUPERT, IDA. John Visser, Architect, Boise, Ida.

THE ELECTRIC HIGH SCHOOL

In 1906 the Snake River Desert in Southern Idaho was a sage-brush waste. At that time United States engineers seeking water power sites constructed a huge dam for irrigation purposes and transformed the territory along the river into a rich farming country. Under irrigation the entire section has been thickly settled forming the county of Minidoka of which the city of Rupert is the county seat and urban center.

The water of the Minidoka dam has, however, not only furnished saving moisture for the many prosperous farms of the Snake River Valley; it has also supplied electric energy to Rupert sufficient to make that community the most "electric" town of its size. It has also made possible a most unique high school—the Rupert "electric" high school, in which heating and ventilation, lighting and every bit of power are furnished by electric devices.

Nearly one-half of the school children of Minidoka county attend the Rupert schools and practically all the students of high-school age are enrolled in the Rupert high school. The Rupert high school, as a school, compares favorably with the best secondary in the East and West. Only experienced college or university graduates are employed and the physical plant of the school is as complete, modern and well adapted to the needs of teachers and students

as can be found in the oldest and richest city school systems. The organization of the school is that of a consolidated rural school district, and the children coming to the grade as well as the high school are transported distances varying from 1½ to four miles. The course of study is that of an accredited four-year high school.

The unique new building in which the school is housed consists of a basement and two stories so placed that the basement floor is on a level with the surrounding site.

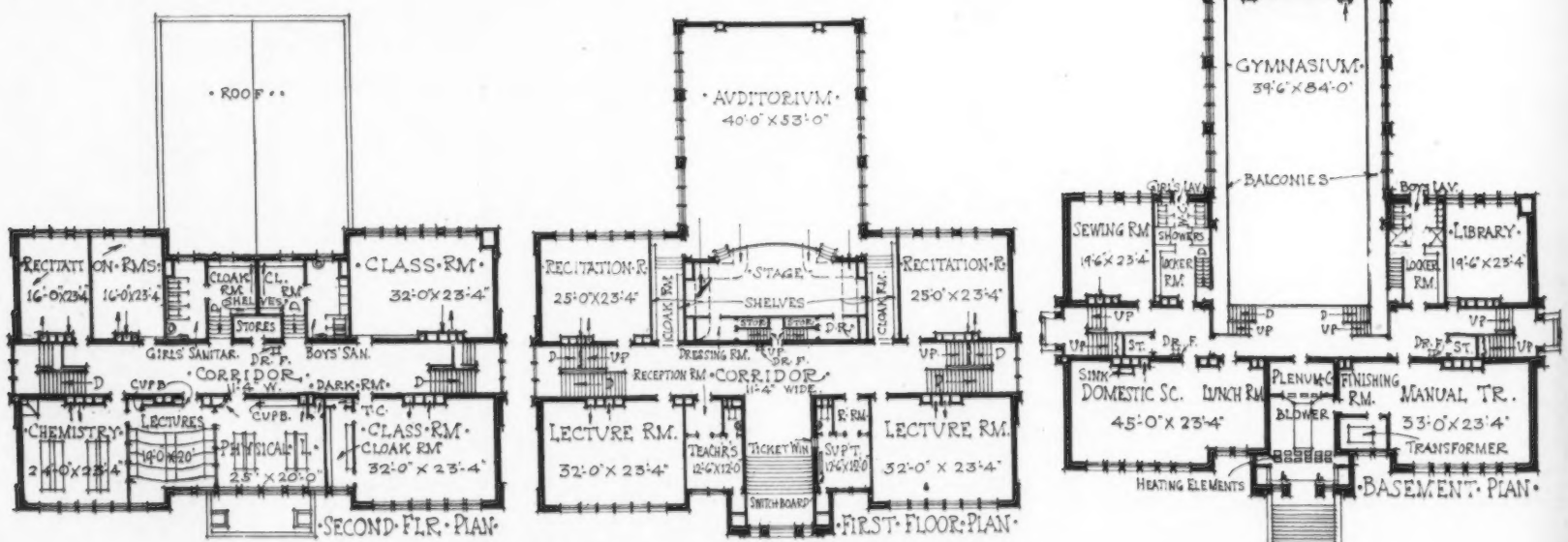
In the basement there are a manual training room fully equipped with benches, band saw, wood turning lathe and tools for a class of twenty; a cooking room with a cafeteria lunch-room in connection; a sewing room; a room for the agricultural classes; a gymnasium and space for the heating and ventilating apparatus and rooms for the janitor. The gymnasium is 40 x 71 feet in size and has galleries the full length of the room on both sides, and across one end. Adjoining the gymnasium, on opposite sides, are dressing rooms, shower baths and toilets for boys and girls.

On the first floor of the building there are four classrooms, each with cloakrooms adjoining. There are also offices for the superintendent and the principal. The auditorium which occupies the rear wing of the first floor is of the same dimensions as the gymnasium below and

has a total seating capacity of 380 and is fitted with steel opera chairs.

On the second floor there are two classrooms, five recitation rooms, toilets, cloakrooms, a dark room and a janitor's supply room. The science rooms on this floor are grouped so as to permit the widest flexibility and the most economical supervision. Both the chemical and physical laboratories are fitted with individual experiment tables for classes of twenty. The lecture room has raised seats, a lecture table and a lantern. Both the laboratories and lecture room are equipped with running hot and cold water, gas and electric power and the most modern tables and cabinets.

The construction of the building is semi-fireproof and permanent thruout. The main building measures sixty-five by one hundred and eleven feet and the rear wing measures forty-three by forty-seven feet. The foundation and basement walls are of reinforced concrete and all of the upper walls and partitions are of brick. The outer walls are faced with a mottled, buff pressed brick and gray imitation stone. All entrances, stairways and corridors are fireproof and all classroom floors and the roof are of slow burning construction fitted with fire stops. The floors are of fir and the trim is of the same wood; the walls are finished with rock plaster. Standpipes have been placed at the end of each corri-



FLOOR PLANS, RUPERT HIGH SCHOOL, RUPERT, IDAHO.



SIDE VIEW RUPERT HIGH SCHOOL.
John Visser, Architect, Boise, Ida.



SCIENCE ROOMS, RUPERT HIGH SCHOOL.

dor and fire gongs are located on each floor. Since there will be no fire in the building the danger of a conflagration has been practically eliminated.

The novel feature of the school is its electric equipment. Electricity from the Government power house furnishes not only the light and motive power for the building but also the entire heat for the classrooms, corridors, etc. The building is said to be the first case on record where a large structure has been fitted entirely by electricity.

The electric heating system installed in the school is remarkable for its simplicity. While the usual arrangement of hot-air pipes and exhaust flues has been adhered to, a battery of electric heat units similar to those used in electric baking ovens, replaces the ordinary furnace and steam coils. Twenty 18-K. W. units are installed in pairs—each pair with a separate control of the current from a switchboard in the principal's office. Thus the principal has always the absolute control and regulation of the amount of current used and the amount of heat provided.

During the month of January and February a thoro test of the heating system was had in bitter cold weather accompanied by heavy winds. The building was new and damp and the test proved conclusively that the expense of heating the building will not exceed \$1,500 per year. The heating plant includes a fan with a capacity of 20,000 cubic feet of air per minute. The fresh air is drawn from outside the building thru the electric heat units illustrated on this page and forced thru a plenum chamber, the floor of which is a tank filled with water. From the plenum room the moist and warm air passes thru the various flues into the classrooms. All the air

in the building is changed every fifteen minutes.

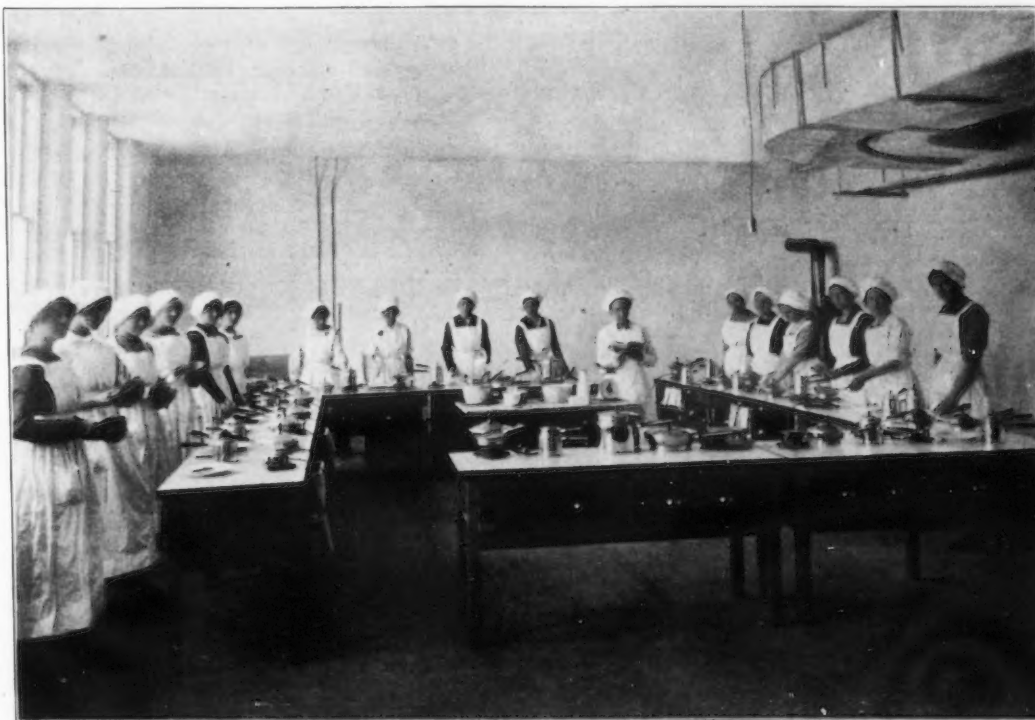
Dampers have been provided which will permit a recirculation of the air inside the building or a mixture of the warm inside air with the incoming cold air. The plant is of sufficient capacity, however, to heat the entire building without any mixture even when the thermometer is below zero—a condition that does not often occur in the Snake River Valley.

At night the building is kept warm without the fan by switching the heaters onto low volt-

age so that they use about 100 K. W. The doors of the classrooms are opened and the cold air duct is shut off. The heated air thus circulates thru the building sufficiently to keep it warm. Fifteen minutes before the opening of classes in the morning the fan is started and the fresh air is circulated.

The electricity is put to work everywhere in the Rupert high school. A 10-horsepower motor used primarily for driving the ventilating fan

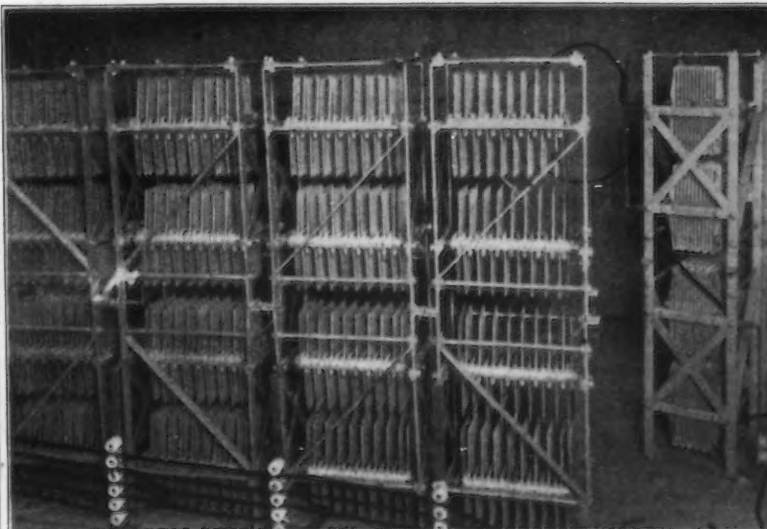
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DOMESTIC SCIENCE ROOM, RUPERT HIGH SCHOOL.



GENERAL SWITCHBOARD, RUPERT HIGH SCHOOL.
(Note Safety Cut-Out at left.)



PORTION OF THE ELECTRIC HEATING UNITS, RUPERT HIGH SCHOOL.
(Each vertical pair of units is controlled by a switch in the principal's office.)

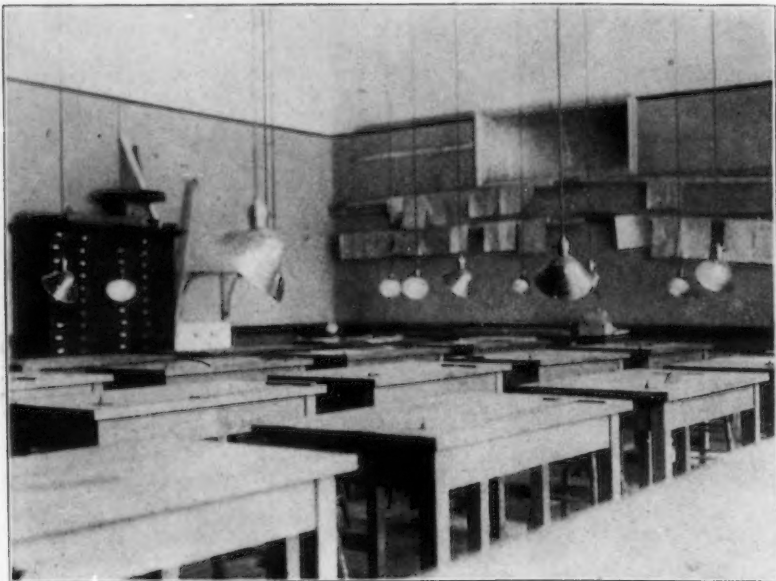


Figure 1.

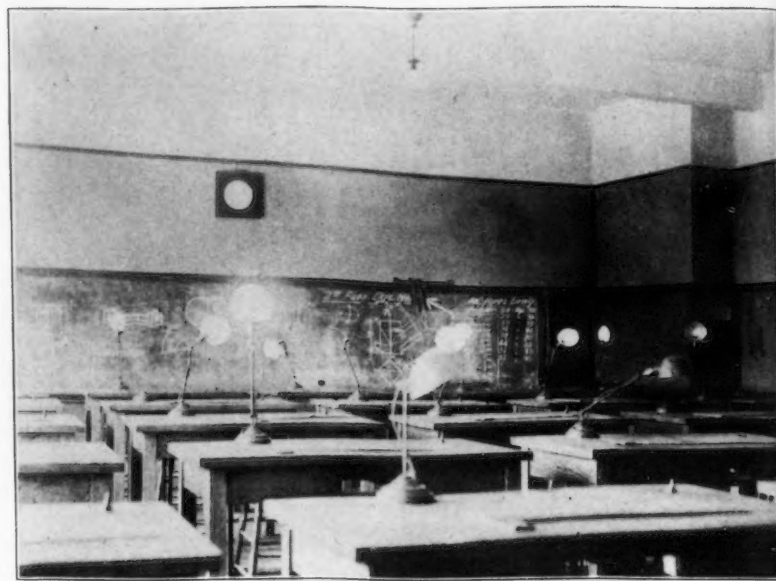


Figure 2.

GLARE IN SCHOOL ILLUMINATION

By M. LUCKIESH, Cleveland, O., Chairman, Committee on Glare, National Association of Illuminating Engineers

Notwithstanding the fact that light is so essential in all of our activities, marked attention was not given to lighting until the present century. Since the advent of the more efficient and satisfactory artificial illuminants social conditions have been revolutionized. Industries are carried on night and day and the activities of human beings in general are now not dependent upon natural light. In fact the control which man has over artificial light makes it often possible to produce better conditions than are possible with natural lighting.

With the advent of the modern artificial illuminants there has arisen a need for increased knowledge regarding the right use of light in order that vision may not suffer. Other factors combined with this have been influential in the birth of a new art and science known as illuminating engineering. This profession has been so developed that within the last nine years national societies of illuminating engineering have been formed in this country, England and Germany, and a large body of technical literature has been devoted to the discussion of the subject. The successful practice of this profession, however, involves much knowledge that is not of engineering nature. The lighting specialist finds something in common with the physicist, physiologist, psychologist, ophthalmologist, architect, artist and many others. In fact it is the belief of illuminating engineers

that few activities can be of more importance to the human race and more interwoven with other professions than the practice of lighting owing to the very nature of light and its necessity in numberless operations in which mankind is engaged.

The prime object of the lighting specialist might be said to be the conservation of vision.

There are two broad aspects of illuminating engineering, namely the purely utilitarian and the aesthetic. Lighting problems involve these two aspects in varying proportions. The problem of lighting in the modern school is not by any means only a problem from the utilitarian side of lighting, yet it is this important aspect of illumination that will be considered here for there is urgent need of consideration of the conditions which endanger the eyesight of thousands of school children. The child's eye is a growing eye immature in development and therefore quite susceptible to permanent injury when subjected to bad lighting conditions. That it is important to conserve the vision of children may be understood better by the fact that a large percentage of human eyes are defective. This condition is recognized by ophthalmologists as largely due to the misuse of light. The eyes cannot be used with comfort unless certain conditions of lighting are fulfilled. Light must illuminate the work to a sufficient intensity, which is a variable depending upon the nature

of the work. The light source must be placed in the proper place and, if in the field of view, must be reduced to a safe intrinsic brightness. Further excessive brightness contrasts must be avoided in order that the eyes can be used hour after hour without undue fatigue and discomfort. The scapegoat which the illuminating specialist wishes to eliminate in all cases is known as "glare."

Glare is a condition, at present almost indefinable; yet fortunately it can be readily recognized and more or less readily eliminated. A bare light source in the field of view produces glare. Likewise the sky viewed thru a window surrounded by dark walls is productive of discomfort and much annoyance—a condition which we commonly call glare. Brightness contrast such as obtains when a white page of printed matter is viewed against a dark background is a condition of glare, almost unnoticed at first, which results in great fatigue after it has existed for an hour or more. The lighting specialist recognizes these conditions and many more which are productive of eye-strain and permanent injury to vision and he is able to control light so as to eliminate them.

Glare arises not only from the primary light sources, such as the sky as seen thru windows or the artificial lamps, but also from secondary sources such as reflection from blackboards, glazed walls and paper. A lighting system may



Figure 3.

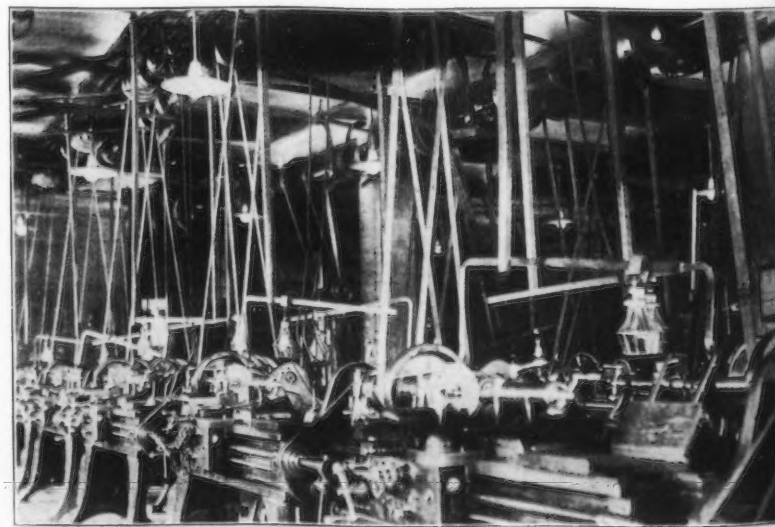


Figure 4.

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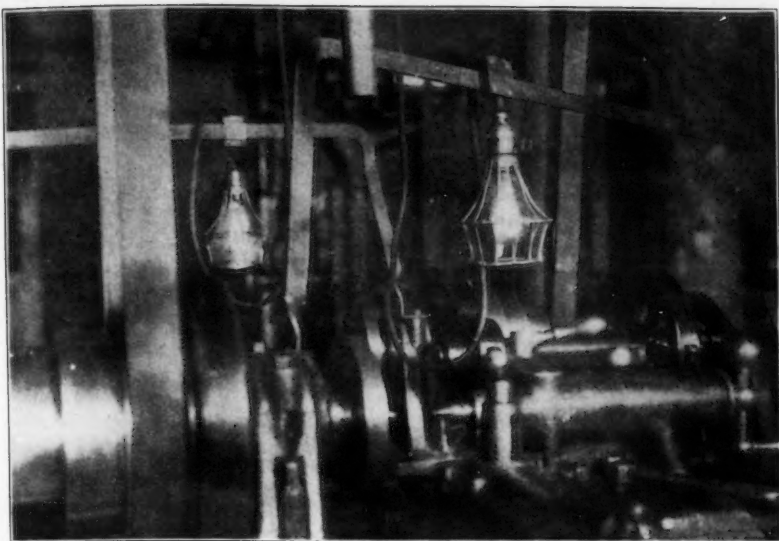


Figure 5.

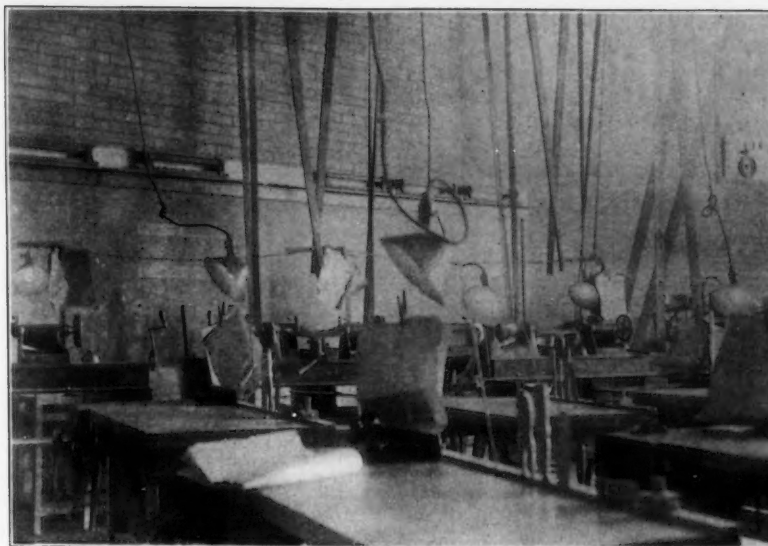


Figure 6.

be well designed, yet all the work of the lighting specialist will be largely undone if glazed surfaces such as blackboards, varnished desk tops, and glossy paper are in evidence. Obviously a person sitting with a mirror in hand will be able to see the images of the light units which are high out of his field of view. This condition is approached when the child is required to read from glossy paper or to view glazed blackboards at an unfortunate angle. This discussion will first take up glare from primary light sources and will be followed by a consideration of glare from reflecting surfaces.

In natural lighting in schools, the light source is the sky. This is of relatively low intrinsic brightness when compared with the intrinsic brightness of artificial illuminants, yet a window often presents a very glaring condition. If the interior walls adjacent to the window are dark this contrast is very annoying. Obviously walls of high reflecting power are desirable. When the room receives light from two sides the walls are bright and the annoying contrast is eliminated yet undesirable shadows are liable to be present. Unilateral lighting is from this standpoint, as well as from the purely architectural standpoint, more desirable. However, with unilateral natural lighting, the walls adjacent to the window depend for their brightness upon the reflected light in the room. This argues for wall coverings of high reflecting power. A blackboard placed between windows is an abominable condition, owing to the glare produced by the contrast, and the discomfort resulting from an attempt to distinguish the writing upon the blackboard. This condition suggests another point observed by the writer, namely that the annoyance of a light source to the eyes depends upon what the eyes are doing.

An open window or the open sky will not cause annoyance under some conditions when the eyes are not called upon to read yet under the same conditions considerable discomfort and even pain is experienced if the eyes are subjected to the effort of distinguishing fine detail. In any system of natural lighting where glare from windows is experienced, some form of approved shade may remove the undesirable conditions.

While in general, natural lighting in schools is found to be far more satisfactory than artificial lighting, the latter is necessary when schools are used at night. In order to insure proper artificial lighting the architect should confer with the lighting specialist for very often the success of a lighting system is primarily dependent upon the placing of the outlets for electric lights. Illuminating engineering procedure is already developed to a sufficient degree which makes possible the predetermination of the illumination. However, there are many schools which were no doubt designed without being intended for night use and therefore the artificial lighting, which was planned only to be added to the failing daylight of late afternoon or dark days, is inadequate for general use at night. There are also many instances where the artificial lighting is of poor design or antiquated and where the rapid strides in the science of illumination point the necessity of radical changes.

One of the tendencies in scientific illumination is toward general lighting, that is a general distribution of light by units out of reach of the light user. To give a portable light source to a student or workman and to expect him to use the light in such a manner as not to harm his eyesight is to presuppose that he is in some degree at least an illuminating engineer. He

has perhaps not even been instructed regarding the first principles of the proper use of light. Such instruction is given in some schools and if practiced generally would do much toward conserving eyesight.

In Fig. 1 a condition is shown which is undeniably very bad. This photograph was taken in a drawing room of one of the most modern high schools. In this school the natural lighting in general is very good but many grave mistakes were made in the design of the artificial lighting. In this illustration the light sources are suspended from a high ceiling and contained in 45° metal reflectors. Difficulty is found in adjusting the light and the swinging of the lamps is annoying. One unit is suspended over each table, and as is to be expected, little intelligence is shown by the students in the use of the light. The condition which confronts many of the boys is very bad. The student on looking up from his drawing sees his own light source glaring in front of him and many others scattered about the room in his field of vision.

Figs. 2 and 3 show conditions in other drawing rooms where each drawing table is equipped with a portable desk lamp the adjustment of which is in the hands of the student. A visit to any of these rooms at any time reveals the pitiful ignorance of and indifference to the harmful effects of the misuse of light. In these drafting rooms if the same electrical energy which is now used were placed in large indirect or semi-indirect units almost sufficient intensity would be obtained and with a system that is approved for drafting rooms. Indirect and semi-indirect lighting do not cause objectionable shadows and are therefore approved for the lighting of drafting rooms. In the case just

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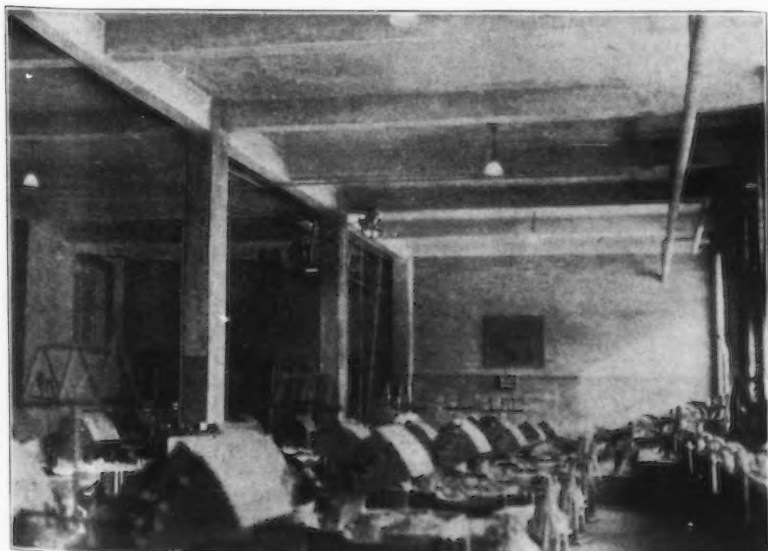


Figure 7.



Figure 8.

THE AMERICAN School Board Journal

DEVOTED TO
Legislative and Executive School Officials
WILLIAM C. BRUCE, Editor

EDITORIAL

RECENT PROGRESS IN SCHOOL ARCHITECTURE.

If, as architects declare, the United States is to have a distinctive architecture reflecting our national characteristics, it is certain that our school and college buildings will contribute a considerable share toward that artistic and useful achievement. In fact, no one who has watched the progress which has been made in the design and construction of schools in the past generation, will doubt but that school architecture has advanced more rapidly than any kind of public buildings, except perhaps, hospitals.

The past year has witnessed a crystallization of efforts on the part of a considerable number of architects and school authorities to devise changes in school buildings, which should meet in the most accurate manner, the widening scope of public and private education. In carrying out the demands of school authorities, the ingenuity of architects have produced several distinct and exceedingly interesting types of schoolhouses which will have an undoubted influence in reshaping our standards and practices.

For some time, the demands of school authorities for better schoolhouses, have been three-fold in character:

First, they have sought greater flexibility by which schoolhouses might be increased in size, with a minimum of expense and a minimum waste of time, to meet the needs of growing school populations. They have, also, asked wider differences in the size of schoolrooms, according to immediate needs, and adaptability in arrangement so that buildings might serve not only for classroom instruction, but for shop, athletic, recreation and social center purposes.

Secondly, a distinct demand has existed for safety, both in the matter of protection against fire and panics, and against health-destroying influences. This safety demand has sought the wider use of fireproof materials, the introduction of better fire escapes, a reduction in the height of buildings and similar precautions. It has, also, directed attention to better lighting, a higher grade of sanitary equipment, more thorough ventilation and more careful cleaning facilities.

A third demand has been for greater simplification in the administration of buildings. This has tried to lead to more direct plans, the elimination of much of the necessity of climbing stairs, the more convenient placing of corridors and exits, etc.

While these demands have been met in a variety of ways, roughly speaking, three general types of schools have resulted:

First, the one-story school in which stairs are wholly eliminated, in which the factor of safety against fire and panics is set at a maximum and in which the administrative and hygienic arrangements are of the best. In California, these buildings have taken the form of great squares, enclosing inner courts or patios, surrounded by gratefully cool and shaded cloisters. In the North and East, where the severe winters demand a more compact schoolhouse, the one-story school has developed with top-lighted classrooms surrounding corridors and assembly halls.

A second type of school is the open-air building in which provisions are made for housing children in conditions approximating a con-

tinued temperature of from 50 to 68 degrees throughout the winter. While this type of building has been more prevalent in the South and West, it bids fair to reduce to a minimum the effect of poor housing upon anaemic and pretubercular children.

A third type has been the cottage school which, tho satisfactory, has been developed in only a few communities. The enormous land areas which such schools require have made school boards hesitate even tho recognizing the advantages of flexibility and low cost for construction.

In high schools, there has been no marked radical improvement during the past year, so far as the general form, appearance, arrangement and construction of buildings go. The tendency has been more strongly than ever toward fireproofing, and while only a fraction of new buildings have been entirely constructed of incombustible materials, the great majority have at least fireproof corridors and boiler and engine rooms.

The practice of providing separate assembly halls and study rooms for high schools is becoming universal, even in small cities and villages. The wider use of the school auditorium for all sorts of community purposes has made school authorities more liberal and this feature of the high school has largely taken on the size and equipment of a fine lecture hall or small theater.

The conflicting theories of ventilation experts, as applied to schoolrooms, received but little encouragement during the past year. The most advanced thinkers, like Dr. Luther Halsey Gulick, have expressed themselves for sane methods in ventilation, for cooler and moister atmospheric conditions and for periodic flushing of rooms with cold, fresh air.

Legislative progress, during the year 1913, has been especially marked by the creation of a "state commissioner of schoolhouses" in Minnesota and the appointment of Dr. S. A. Challman of Minneapolis to fill the new post. This law definitely recognizes the need of expert state supervision over schoolhouse construction and suggests the possibility of setting a high minimum standard of architectural and sanitary perfection in school construction.

All in all, the progress in schoolhouse construction during the past year, has been most gratifying and suggestive. That there is still much room for improvement is not to be doubted. In fact, the greatest objection today is that progress has been only "in spots" and has not been universal or even general. A pressing need is stricter supervision of plans, greater standardization and higher uniform minimum requirements.

While advance must spring from a higher appreciation on the part of school boards for better buildings, it would appear that legislation compelling the acceptance of the best practice, as found in the larger communities, is highly desirable.

BENEFITS FROM CONVENTIONS.

An Illinois superintendent, Mr. E. G. Baumann of Quincy, recorded his recent attendance at the Richmond convention of the Department of Superintendence, in a three-thousand word report to the board of education. In this report he summarized the significant addresses of the meeting as they applied to the local situation with which he and the board are struggling. The report was later printed in full in the daily papers.

Mr. Baumann summarizing the benefits which he obtained from the convention wrote:

"Now the question remains, what did I get from the meeting for the Quincy schools? Answering the question very briefly, I may say (1) a broader and better conception of some important phases of school work; (2) many helpful suggestions that will help in studying the question of economy of time in teaching the branches

in our elementary course of study; (3) a clearer and better viewpoint of vocational education and its relation to our schools; (4) the satisfaction of knowing that our teachers, as a body, measure up to the general standard of efficiency; (5) that wholesome enthusiasm which inspires one at all times to give the best possible service; (6) that power and growth which comes from associating with those who are engaged in similar lines of work, as well as from the discussion of important and timely topics. In short, I feel I can be of greater and better service to the Quincy schools because of having had the benefit of the Richmond meeting."

In outlining to the Quincy board the results of the Richmond convention, Mr. Baumann performed very well a plain duty which rested upon every school executive who made the journey. He conveyed into his community and into his daily work the suggestions and helps which he received.

It would be interesting to learn the results of a questionnaire seeking to determine how many superintendents made reports, and formulated for themselves the new facts, suggestions and the "inspiration" received. The replies would answer that fundamental question: Is the meeting of the Department of Superintendence worth the expenditure of more than a hundred thousand dollars which its costs annually?

THE SPIRIT OF TRIVIAL DETAILS.

Mr. John Wanamaker of the Philadelphia board of education, last month, expressed in a remark of mild disapproval, a fault which has been prevalent in school-board proceedings. After the property committee consisting of five important business and professional men had argued scrubbing methods, as employed by janitors, for the better part of a long session, Mr. Wanamaker remarked: "Gentlemen, you will pardon me if I leave before the meeting is over. You can discuss floor scrubbing without my assistance. I have another appointment and I can assure you that I can spend my time profitably elsewhere."

School-board members have as the prime function of their office, the duty of legislating for the schools. Directly as the size of a school system increases their executive and administrative functions decrease so that in a community of 50,000 or more they cannot profitably engage in such trivial administrative details like scrubbing without reducing their own legislative efficiency. Just like the superintendence of instruction, the detail of the care of buildings belongs to men hired for that purpose, men who by their direct knowledge and experience can give detailed directions to janitors and engineers.

In the school field there is a necessity at present for the development of a class of expert schoolhouse custodians similar to the professional "building managers" in charge of the large office buildings in the cities. Building management is an accepted occupation that has standardized and systematized a thousand items connected with the heating, cleaning, maintenance and repairs, and profitable renting of office and commercial structures. There is no reason why such a standardization of the care of schoolhouses should not be undertaken. It would certainly result in higher efficiency and economy to the schools and would save boards of education an enormous amount of trouble and time.

KANSAS BOOKS.

While the secretary of the Kansas State Text-book Commission has been making a tour of the Middle West urging that other states follow the lead of Kansas in printing their own school books, the teachers of the Sunflower State, and a good part of the press, have been finding fault with the plan of state publication, with the methods of the commission and with the texts

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which they have adopted. Thus, the Kansas City Journal writes under the caption, "A Slouchy Commission:"

The Kansas school-book commission is making a bad record in the matter of the selection of school books. It bought a primer of a very worthy lady in Ottawa, but the primer had to be rewritten. It bought a Kansas history of Miss Arnold of Cottonwood Falls. The history is not a history but an historical novel. The manuscript cost \$4,000 for five years, and the same for every five years thereafter, tho \$500 is to be paid to some other person to revise the manuscript. This story will take the place of the history long in use, written by the late Noble L. Prentiss and in which the people have invested between forty and fifty thousand dollars. This investment will have to be thrown away. The Prentiss history is solid, unimpeachable history—a careful, intelligent and comprehensive statement of facts by one who knew as much as any other man about the facts. It is really a history and ought to be retained in the schools until a better history is discovered. We suppose the school-book commission is, like most commissions, lax in its work, leaving most of its acts to be practically dictated by somebody, somewhere around, who is taking good care to suit himself regardless of other people's wishes and other people's money. The best educational authorities of the state for years have approved the Prentiss history. There is no sense in paying fifteen thousand dollars for another and making the taxpayers spend another forty or fifty thousand dollars in buying the books.

Since the above was written, a committee of the state teachers' association has made a public request that adoptions by the commission cease until the state legislature shall have met—a request which is not likely to be heeded.

Thus far the Kansas commission has not given evidence of its ability to make the enormous savings which the lobbyists promised after the bogy "book trust" had been driven out. In fact, there are indications that the promoters of state printing had another motive than the welfare of the schools and the saving of the taxpayers' money.

OBEDIENCE TO LAW.

Correspondence from Buffalo, to the *Journal*, contains this significant item: "When vaccination certificates were demanded recently of school teachers at Niagara Falls, N. Y., during the smallpox epidemic, a number stayed away from work. The school board approved full pay for February, but declared that salaries would not be continued in case of further absence."

The Niagara Falls teachers who, altho well, stayed away from their posts in defiance of an order of the school board, exhibited a very low standard of professional ethics, and a surprising lack in leadership and courage. Dismissal would have been the proper punishment.

A SUCCESSFUL "COMPETITION."

In the *School Board Journal* for September, 1913, appeared the details of a novel "competition" for a new high school to be erected at Parkersburg, W. Va. This competition did not make a pretty picture or a well-drawn set of sketch plans the deciding factor in selecting an architect, but sought to determine the true fitness of the men and to eliminate "pull" by such questions as:

"How long have you been engaged in your profession as an architect?"

"What has been your training and experience? Included in this question the board desires information as to what buildings you have designed, including buildings other than school buildings.

"Give the approximate cost of the various structures which you present as examples of your work. Also, state the names of the general contractors for such buildings, and state whether or not you had charge of the supervision of the construction.

"Give an outline of your methods of doing business—how your plans are prepared, how de-

tailed, how many copies of plans you furnish. Submit samples of working plans, details and specifications of at least two jobs.

"A brief reference to your methods of handling work would be desirable.

"What are your facilities for handling work of this kind? Have you in your employ competent designers and engineers and building superintendents?"

"Give such other information as you yourself would like to have if you were about to employ an architect for a building of this kind."

The results of the competition were highly satisfactory according to the Parkersburg school authorities. The usual intrigues and the solicitation of members on political and social lines were noticeable by their entire absence. The man chosen, Mr. Frank L. Packard of Columbus, Ohio, was able to demonstrate that his services would, as a whole, prove most advantageous.

The Parkersburg plan of "competitions" can be heartily recommended for large school-building projects.

A DECISION OF IMPORTANCE.

The Massachusetts Supreme Court has, within the month past, decided that a school board has no legal right to pay a teacher for services not actually rendered, and that consequently the Salem school committee had made an illegal agreement with one of its force to give him a vacation for a year at half pay, even if the teacher had been made ill by extra work performed. The court extended its decision to other public authorities, saying that it is beyond the power of any board of public officers or of the city itself by a general vote to grant a gratuity, and that municipalities have no power to appropriate money as gifts to any persons, no matter how strongly public sympathy may be moved in their favor.

The decision is of more than ordinary interest because it reaffirms, in effect, the old principle that school funds can be spent only for purposes expressly authorized by the statutes and for work actually performed by employes and officials of the schools. In Massachusetts and in other states, it will, undoubtedly, have a decided effect upon the extension of the "sabbatical year" idea and upon rules of school boards allowing pay during extended illness.

SUPERINTENDENCY CHANGES.

Mid-year troubles between school boards and superintendents seem to point to an unusual number of changes in the superintendencies of smaller cities, particularly in the North Central states and in the Southern states, immediately adjoining. And, while the causes of the friction are various, the ancient conflict of preroga-

tive and authority stands out as the one underlying difficulty of practically every situation.

Of the particularly bad cases the fights in Bay City and Menominee, Michigan, are disgraceful. In both, the president of the school board, for some real or fancied wrong committed by the superintendent, has taken it upon himself to have the latter "fired." And in both cities there is every evidence of the efficiency and leadership of the superintendent and public sentiment has been almost unanimous against the disturbing clique on the school board.

Our laws establishing the powers and duties of superintendents are sadly in need of revision and modernization, particularly as they relate to initiative in such professional matters as courses of study, the selection and dismissal of teachers and discipline. Changes lengthening the term of office and fixing minimum salaries are similarly needed. But even the most perfect laws cannot be of avail if we cannot remove the influence of evil politics and of malice engendered by vindictiveness and spite.

A CHANGE IN PRICE.

Beginning May first, the subscription price of the *American School Board Journal* will be \$1.50 per year. This increase is made imperative by the general rise in the cost of production, by the growth in the expense of obtaining the highest grade of editorial material and by the expansions of the news and service features.

Readers of the *Journal* may be assured that the increase in subscription price will be followed by still further improvements in the quality and amount of information and assistance which will be offered thru our columns.

CRITICISM VS. FLATTERY.

Discussing criticism of modern education, President Nicholas Murray Butler of Columbia recently said:

To observe with scientific precision, to report with scientific accuracy and to think with logical correctness are the chief needs of the educational guide of today. We have suffered overmuch from platitudes in education, and we have paid our full homage to misguided and superficial flattery of schools and school systems when searching and constructive criticism was what the public interest demanded.

The time has certainly come when we must leave off tickling our own vanity and arousing the scornful smiles of other peoples by shouting loudly that our schools, our colleges, our universities, are the best in the world; that our expenditures for education are the largest ever known and that, looking at all the peoples of civilization dispassionately—which dispassionateness we gladly admit—no one of them is in any way the equal of ourselves.

Persistent, searching, constructive criticism is what American education most needs today. We must ask not only whether what we are doing is worth while in itself, but toward what goal it is tending.

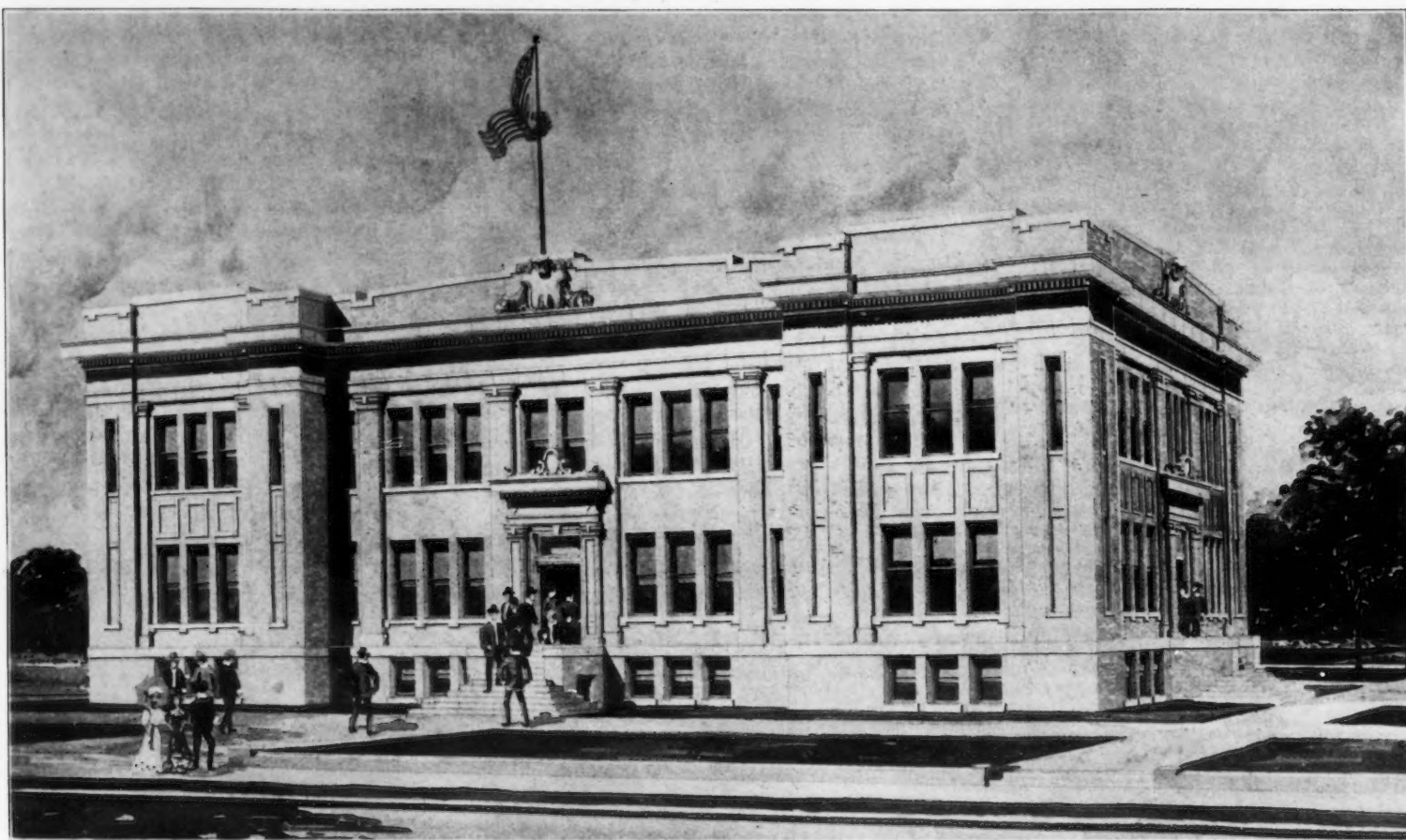
SCHOOL BOARDS TO MEET.

A conference of school officers representing the Northwestern states, Oregon, Washington, Idaho and Montana has been called in connection with the convention of the Inland Empire Teachers' Association. The convention will meet in Spokane, Wash., on April 15, 16 and 17 and President L. R. Alderman has prepared a program that promises a record-breaking gathering of educators. The school officers will take up problems of building and grounds, accounting and finance, legislation and other administrative topics. An exhibition of schoolhouse plans is proposed. Information about the convention may be had from President L. R. Alderman, Portland, Ore., or from the Spokane Chamber of Commerce.



A Good Report?

—Chicago Tribune



CARPENTER MEMORIAL SCHOOL, No. 2, NATCHEZ, MISS.
R. H. Hunt, Architect, Chattanooga, Tenn.

A MEMORIAL SCHOOL.

The Carpenter Memorial School, No. 2, illustrated on pages 26 and 28 has been erected and presented to the city of Natchez by Mr. N. L. Carpenter of New York City as a tribute of esteem for his native city and as a memorial of his family. The arrangement of the building emphasizes strongly the wider uses to which the school plant may be put for adult as well as child education. Incidentally, the building is one of the most carefully arranged and completely equipped in the South.

In designing the exterior the architect has made free use of classic forms in a manner typical of the most modern American school architecture. The walls are gray vitreous brick trimmed with cut stone and terra cotta. The effect is dignified and restful.

The building has been planned for a total capacity of 400 children in the grades below the high school. In addition to the regular classrooms it has:

1. A gymnasium fully equipped as a physical training center for all the grade schools of the city.

2. A swimming pool of enameled tile with shower baths. Both pool and gymnasium are in charge of a physical director who is a member of the teaching corps and gives his entire time to the work.

3. A complete woodworking department which is a manual training center in charge of a special all-day teacher.

4. A domestic science room presided over by a full-time teacher.

5. A library containing 10,000 volumes, of which 3,000 are selected for children in the grades. The library is open for free use to the general public and a trained librarian gives her entire time to the administration of the room.

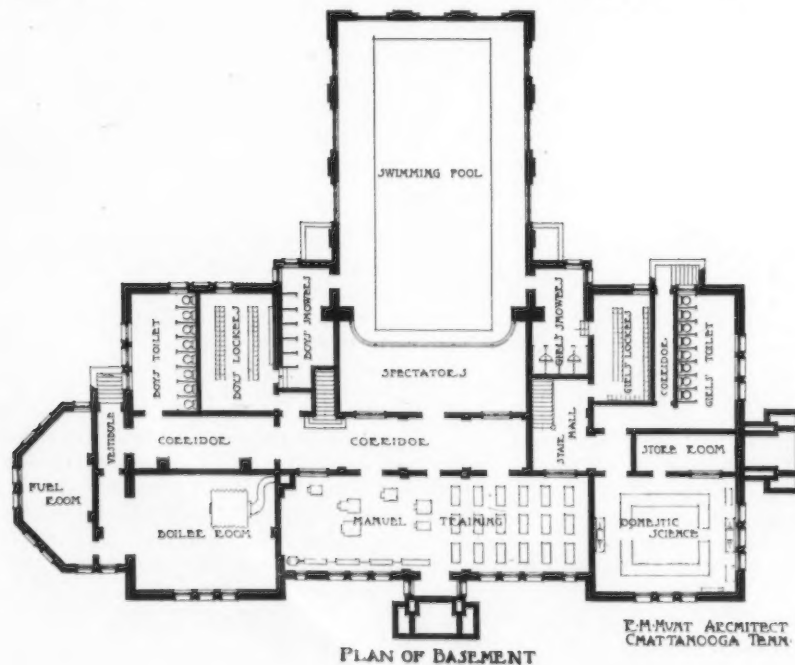
The general arrangement of the building is simple and direct. In the basement are located the swimming pool, showers and lockers for girls, showers and lockers for boys, toilets for both

boys and girls, domestic-science department, store room, manual-training department, boiler and fuel rooms. The last mentioned are enclosed in fireproof ceilings and walls and have no direct entrance to the remainder of the basement.

On the first floor of the building are located the kindergarten department, with cloakroom, two rooms for the primary department, a gymnasium, office, and library. The last includes a stack room, delivery desk, reference room and large reading room. On the second floor are located seven classrooms with a cloakroom for each and two toilet rooms.

The building thruout is well lighted, provided with ample corridor space. It has two wide stairways leading from the basement to the second floor. Four entrances are provided, two from the streets and two from the playgrounds in the rear.

The interior is simply finished with especial attention to heavy wear and hygienic maintain-





Pupils of the Rusk School, Dallas, Texas, in demonstration before the State Teachers Association, November 28th, 1913.

The School Board of Dallas, Texas adds the Victor to its school equipment

Ever since its introduction into the schools, when the Victor first demonstrated its value in school work, it was a foregone conclusion that the school boards would eventually furnish their buildings with the Victor, just as they do with various other articles of school equipment—and that is just what is happening.

Heretofore each individual school has usually installed its own Victor, but now school boards have become so impressed with the usefulness of the Victor, and the fact that it is in daily use in the schools of more than **one thousand cities**, that they are including it as part of their standard equipment.

The school board of Dallas, Texas, has just appropriated **two thousand dollars** and added twenty-six more Victors (and appropriate records) to the number already in the schools, and they will eventually have two Victors in every school in the city.

Another indication of the increasing influence of the "Victor in the schools" is the endorsement and approval of the Victor book "What We Hear In Music" by the Supervisor of Music and Board of School Superintendents, which has resulted in the school board of New York City placing it on the regular list of text books for use in the New York schools.

You have only to hear the special school records for marching, calisthenics, folk dancing, to realize the valuable field and boundless possibilities of the Victor in school work.

Any Victor dealer will gladly arrange for a demonstration right in your school. Write to us for booklets and full information.

Educational Department

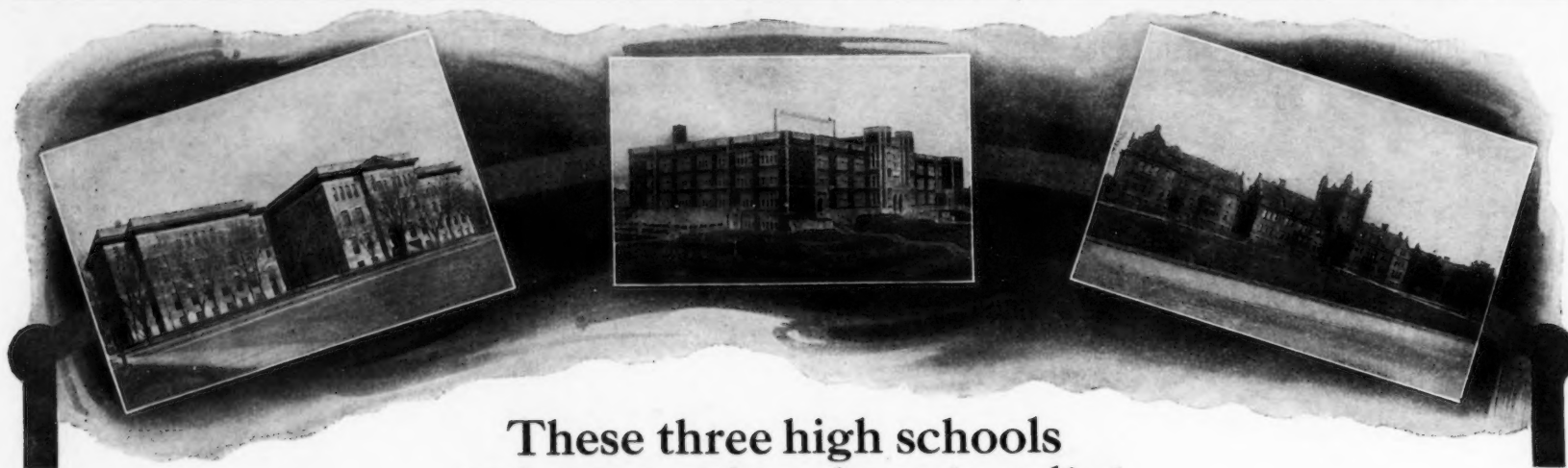
Victor Talking Machine Co., Camden, N. J.



Victor XXV
\$60 special quotation
to schools only

The horn can be removed and the instrument securely locked to protect it from dust and promiscuous use by irresponsible people.





These three high schools
and many others have installed

Western Electric Inter-phones

to facilitate executive supervision by intercommunication.

Inter-phones require no operator other than the user, and will put the principal in instant communication with any one of the teaching staff.

They will save trips to and from the class-rooms, take the place of messengers, and enable the principal to give directions while visiting a class-room.



Write to Dept. 53-BA for a list of schools that have successful Inter-phone installations.

WESTERN ELECTRIC COMPANY

Manufacturers of the 7,000,000 "Bell" Telephones

New York	Chicago	Kansas City	San Francisco	Montreal	London
Buffalo	Milwaukee	Oklahoma City	Oakland	Toronto	Berlin
Philadelphia	Pittsburgh	Minneapolis	Los Angeles	Winnipeg	Paris
Boston	Cleveland	St. Paul	Dallas	Calgary	Rome
Richmond	Cincinnati	Denver	Houston	Vancouver	Johannesburg
Atlanta	Indianapolis	Omaha	Seattle	Edmonton	Sydney
Savannah	St. Louis	Salt Lake City	Portland	Antwerp	Tokyo

EQUIPMENT FOR EVERY ELECTRICAL NEED



Write to Dept. 53-BA for further information regarding these efficient school helps.

(Concluded from Page 26)

ance. The walls and ceilings are hard plastered and painted in flat colors. The floors are edge grained yellow pine. The same wood has been employed for the general trim in the classrooms and corridors.

Heat for the building is furnished by a modern vapor system. The ventilation is of the direct-indirect type. The sanitary equipment includes the most modern type of flushing closets, individual urinals, hygienic drinking fountains and a vacuum cleaning system.

The school equipment proper is modern and complete in every respect. It includes composition blackboards, movable oak seating, mahogany library furniture, adjustable window shades, etc. The lighting of the classrooms and the library is of the indirect electric type.

The total cost of the building was \$90,300, approximately \$219.75 per pupil, and 19.7 cents per cubic foot. The heating plant cost \$7,900.

The building was designed and constructed under the supervision of Mr. R. H. Hunt of Chattanooga.

THE OPEN-WINDOW SCHOOLROOMS OF MIDDLETOWN, CONNECTICUT.

By Wm. F. Wheatley, Superintendent of Schools.

The writer has known for some years of the good results to sickly children from outdoor schools and almost from his first acquaintance with these schools he has wished to apply the principle, with some modifications, to normal children. Dr. W. W. Roach's account of "An Open-Window Experiment" in Philadelphia and Dr. Helen C. Putnam's book, "School Janitors, Mothers and Health," were the immediate cause of his trying open-window schools in Middletown.

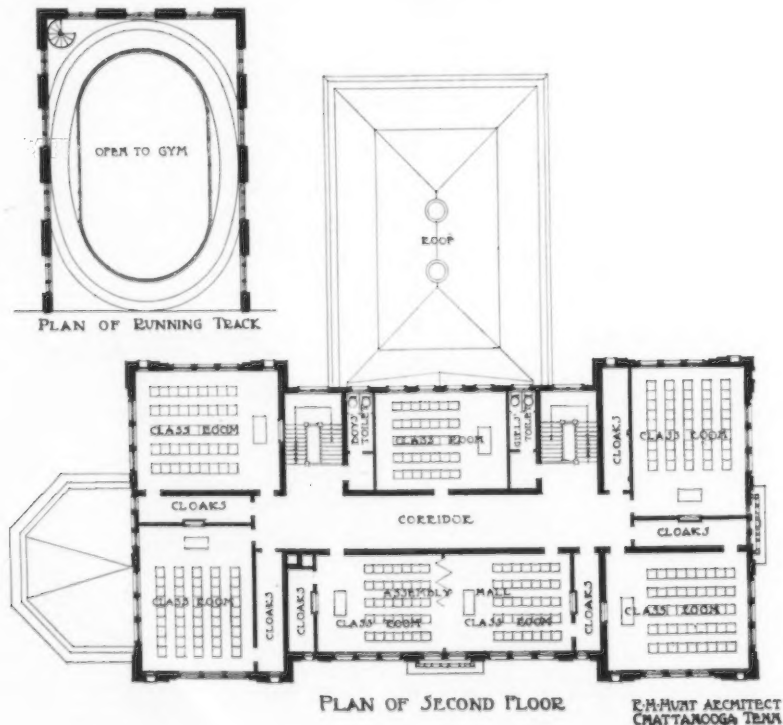
To make this brief account as definite as possible there will be answered some actual questions recently asked concerning the Middletown open-window plan.

1. Permission was not asked of the parents. The plan was presented to the Board of Education, not as a radical or extreme measure but simply as a step in the right direction, and permission was secured from the Board to try the plan in all of the grade rooms of the city and to have circular letters of explanation printed and sent to each home. This letter read as follows:

Middletown, Connecticut, November 17, 1913.
TO THE PARENTS OF MIDDLETOWN SCHOOL CHILDREN:—

In a matter of great importance to your children we ask your co-operation.

Until quite recently sanitary authorities had unbounded confidence in heating and ventilating systems which were supposed to supply proper air to 45 or more children in a room and this without assistance from open windows. It was also supposed that a temperature of from 68° to 70° was about ideal. As for the moisture in the air or lack of it, the shrinking and cracking of woodwork in the room was noticed, but no thought was given to the effect of this dry



Equip the Reading Room

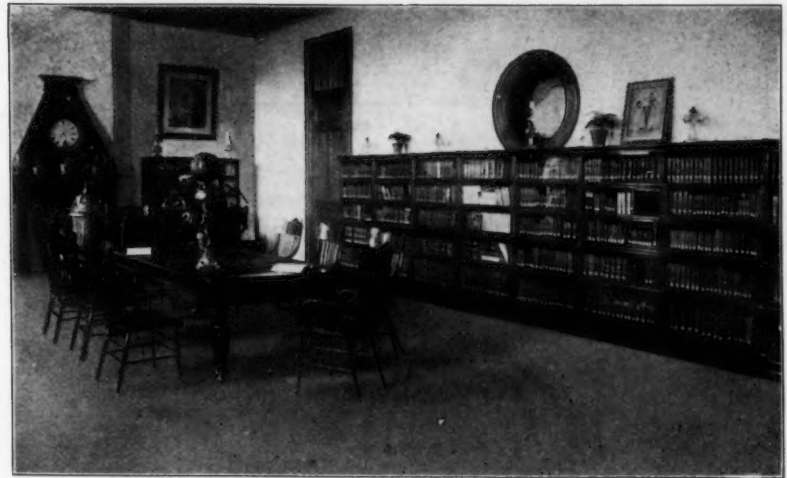
with

Globe-Wernicke Sectional Bookcases

— the only Bookcases ever built with a patented felt strip to exclude dust and form an air-cushion to break the force of impact when door is dropped.

They are elastic and grow, a section at a time, as the book collection increases. They occupy as much or as little space as you can spare.

They facilitate the classification of books by authors or topics, and make for economy because their glass doors are a protection to the contents.



For the School Office and Board Room, nothing is more important for the protection of valuable records than a—

Globe Cabinet Safe

Made of steel, enameled to resemble either oak or mahogany, portable—it costs considerably less than the old-style safe and affords satisfactory insurance.

Globe-Wernicke products cost no more than the ordinary kinds—and should be considered as investments rather than expenses. Our local agents are most everywhere; but if not represented in your locality let us send you valuable Catalogs on Globe-Wernicke Equipment applied to schools: Bookcase Catalog No. 278. Cabinet Safe Catalog No. 378.

Free to Schools: "The World's Best Books," a list for distribution to English classes compiled by Dr. Charles Eliot, Hamilton Wright Mabie, John Ruskin, W. D. Howe, and others. Also sample cards for keeping school records.

The Globe-Wernicke Co. Cincinnati

Mfrs. Of Sectional Bookcases—Filing Cabinets—Stationers' Goods

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air upon the mucous lining of the nostrils and throats of the pupils.

Many recent investigations have proven beyond any doubt that the latest and best ventilating systems unassisted cannot and do not supply sufficient fresh air for even 35 children in a fair-sized schoolroom, and that unless the open windows are used freely or an expensive humidifying system is installed, the schoolroom air becomes in the fall, winter and spring so dry that it causes sore throats, colds, bronchitis, and many other ills.

The outdoor and open-window schools, intended for sickly children, have shown the wonderful effects of fresh, cool, moist air, the children in most cases regaining their health and also advancing more rapidly with their studies than well children breathing the regular, stuffy, warm, dry air of the schoolrooms. These fresh air schools have multiplied the last few years so that now there are hundreds of them in the United States.

For some time we have been feeling our way in this matter and we are now ready, with your co-operation, to put into practice the following plan. To give your children fresh air, cool enough and moist enough to be most healthful and to lessen greatly the danger from contagious diseases, we plan, as far as advisable, to have the windows open most of the time on one side of their schoolroom and, so far as we are able, to regulate the temperature keeping it between 64° and 68°. We shall protect the children from drafts and give them more physical exercise than in the past, and we ask you to provide them with sufficient clothing for the cooler air or to let us know if you are unable to do so. In this case, thru the kindness of friends, we can supply some extra clothing.

If you fear to have your children in the cooler, fresher, moister air that we propose for them, please talk the matter over with your physician who, I am confident, can reassure you

that the open-window room will mean fewer colds, better health generally and better progress in school work.

If you have any questions to ask us or if any of your children need special attention, kindly confer freely with the teacher, principal or superintendent of schools.

W. A. Wheatley, Supt. of Schools.

The open-window plan is being tried in all of the 33 grade rooms of Middletown, where over twelve hundred pupils sit.

2. The rooms are heated and an effort is made to keep the temperature between 64° and 68°. So there is nothing radical or extreme about the temperature. We were simply determined to get away from the excessively high temperatures of over seventy degrees which have been too common in the past. Temperature cards kept in the rooms tell that temperatures we actually did have during one week ranged from 62° to 70°. In the lower grades the temperature cards are filled in by the teachers, in the upper grades by the pupils.

3. We have no humidifying apparatus but trust to the outside air to materially increase the moisture of the air inside. This simple means does not adequately humidify the schoolroom air but it does help considerably.

4. We have been required to furnish practically no extra clothing as our temperatures are not really low but more nearly normal than seventy or above.

5. We have simply opened the windows on the one side of the possible two or three sides supplied with windows. Our plan would be more successful if we could have wind shields, as on some days we have had to abandon the open windows because we could not protect the children against drafts.

6. While we have kept no systematic records we are convinced that our pupils this year are better physically and more alert in their school work. No parents have sent in complaints of

colds said to be the results of the open windows. On the other hand, numerous parents have reported an improved physical condition of their children.

7. Nearly all of our teachers have taken kindly to the plan and have co-operated in making the experiment a success. Several report that they themselves are not so exhausted at the close of school and some have actually taken on flesh since school began in September. We should also mention the fact that our school nurse has been in hearty sympathy with the open windows and has on every occasion championed the cause of fresh air.

In conclusion, we are trying nothing extreme but only what we consider natural and sensible. We hope to get better results next season thru the help of wind shields. We are confident that this year's trial has demonstrated conclusively that fresher, cooler and moister air is easily obtained and results in better health and better school work.

Middletown is the first city in the United States to introduce the "cold room" idea in all its schools. Mr. Wheatley's modest description tells of the success of the experiment.—Editor.

ACCOUNTING OFFICERS WILL MEET.

The National Society of School Accounting Officers will hold its annual meeting in Memphis, Tenn., May 19-20-21, 1914. The school-board secretaries and accountants are cordially invited to attend the meeting. An important program is in process of preparation and important discussions are promised. A year ago the association adopted a report for unifying and standardizing school accounting and further work along this line will be undertaken.

The officers of the association are: Hon. Henry R. M. Cook, president, New York, N. Y.; Wm. Dick, secretary-treasurer, Philadelphia, Pa.

The local arrangements and the program are in charge of Mr. Melvin Rice, assistant secretary and auditor of the Memphis board of education.

If You Had Seen a Navajo Indian

weaving on his primitive loom you never would have forgotten the crude methods by which he obtained such marvelous results. Take any subject you may, history, geography, geology, industries, literature, etc., and place the essentials of that subject before a class in photographic form as the work progresses, and at the end of the term that class will know thoroly the important features of the course.

Underwood & Underwood Stereopticon Method of Visual Instruction

Each of the different branches represented in this system was prepared by the highest educational authority of the country on the subject, and the work accomplished covers the entire visualistic requirements of the Graded and High Schools.

There are 1,000 slides in the system arranged according to a cross-index plan. Each scene is accompanied by detailed descriptive text and illustrates from two to six, in some cases ten or more, of the different study topics taught in the regular school courses, giving the system a teaching capacity equal to 10,000 slides selected on the usual expensive and cumbersome plan.



We supply this system in cabinet form, cross-indexed, and so classified that the full teaching value of the entire collection is made instantly available, rendering unnecessary the usual painstaking research on the part of the busy teacher.

This is only a partial description of the scope of our system. Permit us to send you a complete outline with catalogs of lanterns, etc.

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NEW YORK



A Pension Bill for Janitors in New Jersey

Permanent tenure is admittedly of good avail, especially in the case of capable employees ruthlessly attacked. An amusing occurrence at Long Branch, N. J., some weeks ago, served to emphasize this point.

A colored gentleman succeeded to the janitorship of a colored school not long since, upon the withdrawal of his predecessor, who had been much beloved by the parents of the section for latent qualities not readily apparent to the Board of Education.

Upon the ascension of the new incumbent to the throne it was noticeable that a certain frigidity permeated the atmosphere of the colored section and finally the new man found himself unpopular, not alone with the pupils, but with their parents as well. Eventually a petition for his dismissal was presented to the Board, signed by seventeen shining lights of the colored colony. No definite charges were made and the board was at sea in the matter.

It ultimately simmered down to one awful fact: The new comer refused absolutely to dump the school's ashes in a nearby lot without first sifting them religiously! It developed that by this dreadful action he was upsetting a tradition that had been taken advantage of in that neighborhood for years. Since this determined stand of the new janitor, the coal dealers report brisk sales from the particular section affected, —something new in their experience.

The teachers of New Jersey are protected by a substantial tenure-of-office act. They are likewise entitled to a pension from the municipality in which they have taught continuously for a stated period. This is exclusive of the pension provided by the Teachers' Retirement Fund of the State. Take it all in all, the teachers are quite comfortably situated, or will be when they reach old age and its accompanying incapacity.

Not to be outdone in these matters, the school janitors are also under permanent tenure after

the expiration of a year's satisfactory service. That's half the loaf. And now they are after the other half,—the pension,—thru the instrumentality of an organization known as the "Public School Janitors' Mutual Aid and Benevolent Association of New Jersey," numbering about 400 members.

The name is so long that it has already reached to the Legislative Hall at Trenton, where, last year, a bill providing for the retirement and pensioning of its members was passed by the Assembly. The association was less fortunate in the Senate, however, and lost out because sufficient time for consideration seemed to be lacking. This term, however, the bill will again be presented and its sponsors look forward to its early transcription to the statute books.

Altho some minor changes, giving local boards more power in the administration of the fund, may be made, the bill will closely resemble that of last year, which provided:

1. That there shall be a Board of Trustees of the "School Janitors' Pension Fund," to consist of three members from the State Board of Education, selected by the Governor, and three members from the Janitors' Association to be chosen by that body at its annual convention. Terms to be for one year.

2. That the State Treasurer shall be ex-officio treasurer of the Fund to be established.

3. That the Fund shall be made up as follows: Two per cent of the salaries of those continuously engaged in the janitorial service of the New Jersey Public Schools for ten years or less (former experience counted). Those engaged for more than ten and less than twenty years shall contribute two and one-half per cent of their salaries and those engaged for more than twenty years shall pay three per cent. These deductions are to be made by the local Boards when the monthly salary warrants are drawn.

The bill is admittedly weak, in that, at this point, it provides in addition to these salary deductions, that there shall also be raised annually by taxation in each school district, a sum equal to these amounts so deducted. Of course this added burden imposed upon the taxpayers corresponds with the teachers' pension bill in a measure altho the manner of raising the money and the amounts thereof differ considerably.

In the case of the teachers the municipality pays a separate pension (one-half the average annual salary for the last five years of service) and the Retirement Fund pays another.

The janitors, however, have embodied these two modes of payment in this one bill and critics claim that the latter method will mean much additional expense for the municipality, in the long run. For whereas, in the case of teachers, the number of annuities will be small and the amount to be raised locally correspondingly minimized, the tax for the pensioning of janitors will be approximately fixed, year in and year out. And whereas there may be long periods when no local pension tax need be raised for teachers, by reason of the fact that there may be no teachers eligible, there would always be the tax for janitors so long as they are required to care for school buildings.

Another objection is the fact that since these amounts locally raised would be sent to the State Treasurer, the municipality would be contributing toward the pensions of janitors in other districts, while a great number of years might elapse before a janitor in that particular district would be entitled to a pension.

The further provisions of the bill are:

4. The Trustees may set aside any portion of the Fund to form and constitute a permanent principal thereof.

5. The Board of Trustees shall report annually to the State Board of Education concerning the financial condition of the Fund.

6. They shall report also to the annual convention of janitors each year. This convention is to be comprised of delegates from each county



PATEK'S Mattcote(Egg-shell) THE STANDARD DULL TONE FINISH FOR SCHOOL INTERIORS

Patek's Mattcote (Egg-Shell) is an oil paint for interior walls and wood-work of schools. It dries with a beautiful dull finish and meets every requirement for school interiors.

SANITARY—The hard, non-porous surface of Patek's Mattcote (Egg-Shell) is absolutely germ-proof. The smoothness of the surface prevents dust and dirt from adhering to the walls or ceilings and permits them to be easily cleaned.

HYGIENIC—Patek's Mattcote (Egg-Shell) promotes hygiene since it is pleasing in appearance and beneficial in effect. The soft dull tone and color is restful to the eye. It contains no lead and is non-poisonous, giving off no offensive odor.

HARMONIOUS—The beautiful colors permit many harmonious color effects. The standard colors can be tinted to any desired shade or to harmonize with the furnishings.

WASHABLE—Patek's Mattcote (Egg-Shell) can be washed frequently with Ivory soap and water without effect to the surface or coloring, thus promoting sanitation.

DURABLE—The quality of the pigments used and the skillful supervision in combining these produces a finish that will withstand the severest usage.

ECONOMICAL—Patek's Mattcote (Egg-Shell) is the most economical finish that can be used in the school. The extreme durability, covering capacity and ease of application are the basis of its economy.

Better than Lead and Oil—Cheaper by far
FREE TRIAL CAN SENT TO SCHOOLS
Write for booklet B-7, and free sample

PATEK BROTHERS
Paint Specialty Makers
MILWAUKEE, WIS.

Standard Colors for School Interiors

The color of the walls in a school room has an important bearing on the health and progress of the pupil. Such colors only should be used that do not bring fatigue to the eye or absorb the light, and all colors should be used with reference to the location of the room.

The following are standard colors as determined from various tests and can be obtained by the use of Patek's Mattcote (Egg-Shell).

PATEK GRAY—A basic color. Should be tinted to produce more inviting effects.

PATEK GREEN—The most beneficial color to use. Various shades can be obtained by tinting to suit the location of the room with reference to the amount of light.

PATEK CREAM—Preferable for the ceilings or walls where the light is poor.

PATEK BUFF—Produces pretty effects and is preferable for north exposures.

PATEK TAN—Considered among the warmer colors and should also be used in rooms facing the north.

PATEK BLUE—Induces quietness and should only be used in the lighter shades.

SCHOOL DEPARTMENT.

Further information concerning the above colors as well as how to produce the various shades will be gladly furnished by our School Department. Address Manager School Department.

Patek Brothers
MILWAUKEE

in the State, as follows: One delegate for each fifty janitors and other persons in the janitorial service in each county and one delegate for any fraction over fifty. The delegates are to be elected by the vote of a majority of the janitors present at a meeting called for the purpose of making such election.

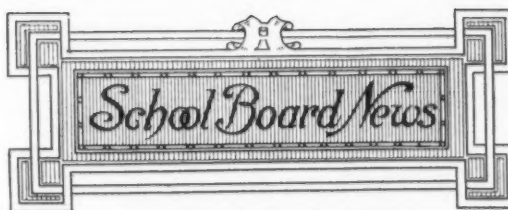
Then, coming to that portion of the contemplated act in which the janitors are naturally most interested, it is provided that any person employed as a janitor or in the janitorial service in the Public School system of the State for a period or periods aggregating at least twenty-five years, who shall, in the judgment of the Board of Trustees of the Fund, have become incapacitated from further performing the duties of such position, shall, upon request to said Board of Trustees, be retired on a pension equal to one-half the average annual salary he received for the five years' employment next preceding his retirement. No pension shall exceed six hundred dollars a year.

The State Board of Education is to be a court of appeals in case the decision of the board of trustees is at any time objected to, and if a pensioner resumes any employment which nets him at least as much as the annual pension, the annuity ceases, but will be again resumed upon a discontinuance of such employment.

Pensions are to be paid in quarterly installments the first days of March, June, September and December, and no person entitled to the benefits of the act is to pay a percentage upon more than \$1,200 per annum of salary.

The term used thruout the act, "janitorial service," includes all persons directly engaged by any Board of Education for the purpose of heating, lighting, cleaning or maintaining any school building and its appurtenances. It does not include, however, employees of persons engaged in the janitorial service.

Egbert Close.



A PROGRESSIVE RULE.

Algoma, Wis., is a village of 2,100 population, which has a modern school system and a progressive board of education. At the February meeting of the board, the following resolutions, which contain a most suggestive policy, were adopted:

Whereas, The selection of teachers for the various departments of a school system as large and as complex as Algoma's is, demands of the person making such selection professional knowledge and qualifications which the lay board member, in the nature of things, cannot and does not possess; and,

Whereas, It is the experience and opinion of the leading educators of our country today that the welfare of the children who go to school will be best cared for and advanced and the administration of our school systems will be removed from foreign and improper influences when the board shall pursue the policy of employing only such teachers as may be recommended for employment by the principal, or superintendent of the institution—who is such by reason of his presumed professional fitness, who is held morally responsible for the school's success or failure, and who should consequently, be given opportunity to guard against disaster;

Therefore, Be It Resolved: 1. That it is hereby declared to be the sense and settled policy of this school board that the principal, or other person superintending our school system, be authorized and required each year to recommend a corps of teachers for all places at the disposal of the board, and that no person will be employed without such nomination by the principal, the board reserving to itself the right to veto recommendations in all cases where such action shall

be deemed proper, but in no other manner interfering with the freedom of the principal in making such recommendations.

2. Subject only to the Resolution declaring against the employment of teachers related to board members, and teachers who have not completed the full normal course, it is the sense of this school board that in making nominations to the faculty the principal shall consider only the candidate's qualification for performing the service required, viewed from every point of professional equipment, ability and fitness.

M. L. Reinhart, Clerk.

AMONG BOARDS OF EDUCATION.

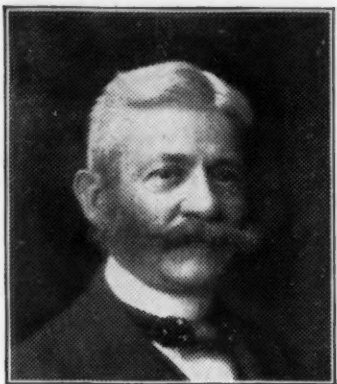
New York, N. Y. In accordance with a custom established by him a year ago, President Thomas W. Churchill of the board of education has prepared an abstract of the leading recommendations made by Supt. W. H. Maxwell in his annual report.

The abstract has been presented by Mr. Churchill to the board of education with the request that the several suggestions and criticisms of Dr. Maxwell be taken up by the various committees of the board for immediate action. According to Mr. Churchill, too many reports are prepared merely for record purposes so that the best results are not obtained from them. Mr. Churchill recommends that investigations of a large number of matters be immediately taken up by the committees in accordance with the findings of the superintendent and his assistants.

St. Louis, Mo. Following a number of complaints from the local labor unions concerning wages, the school board has increased the wage rate of electricians from 65 to 70 cents per hour and that of foreman has been fixed at 75 cents per hour.

The school board of Whitman, Mass., has prohibited the annual trip of the senior high-school class to the National capital at Washington. For a period of twelve years, each annual graduating class has made a trip to Washington in the spring but the board has discontinued the same because of the amount of valuable time consumed.

Upon the recommendation of Supt. F. H. Beede, the police department of New Haven, Conn., has



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provided traffic policemen at the principal approaches of the larger school buildings to direct traffic and to safeguard children who cross the streets. The new plan has been applied to the approaches of eighteen buildings and patrolmen are on duty from 8:15 in the morning until 4:00 in the afternoon, during the hours when children are passing to and from school.

The position of schoolhouse agent has been created by the school board of Holyoke, Mass., with the appointment of Mr. Edward Cadieux. The duties of the new official are threefold. As a supervisor of janitors, he will visit all school buildings at least once each week, supervise minor repairs, instruct janitors in heating, ventilation and lighting and have charge of janitors' supplies; he will issue all newsboys' licenses, supervise the organization of newsboys' associations and see that the laws referring to street trades are enforced; finally he will assist the truant officer and see that the laws relating to children between 14 and 16 years are enforced.

Following a threat of the school board to withhold diplomas, the high-school fraternities at Saginaw, Mich., have disbanded. The students were given their choice and decided to sever their memberships in the organizations.

The school board of Alpena, Mich., has created the position of business manager with the appointment of Mr. Alfred E. Ash. Mr. Ash will act as assistant to the superintendent of schools. It is the aim of the board to put the school system on a business basis so that it may be known at any time what it costs to run any building for a given time, how much it costs to educate a child for a year and other important details which should be in ready reference form in the school department.

A report of the supply commissioner of the public schools of St. Louis, Mo., shows that the book bindery installed for the repair of damaged books, has resulted in a saving of more than \$35,000 in six years. A total of 98,825 books have been rebound at an approximate cost of \$11,000. The original cost of the same texts was \$46,121.

Cincinnati, O. In the interest of economy, the school board has recently passed a resolution requiring that students who are financially able, shall purchase their own material for the work

in domestic science and manual training. It is estimated the expense will be from five to ten cents per pupil, per week. Those who find it impossible to comply with the rule will be provided with their material as in the past.

New York, N. Y. The school board has created the following positions in the administrative department: Assistant secretary of the board with a salary of \$4,000 per annum; an examiner of claims with a salary of \$2,100 and an attendance officer at a salary of \$1,650.

In accordance with a newly adopted policy to discontinue fire insurance on school buildings, the school board of Kansas City, Mo., has appointed a committee to investigate the need and benefits to be derived thru the appointment of an inspector of school buildings. The new official would be given the inspection of buildings with regard to protection against fire hazard. It is the belief of the members that the money which has previously been paid out for insurance can be more advantageously used in employing an inspector and in paying for repairs to buildings.

Upon the suggestion of Supt. F. B. Dyer, the school board of Boston, Mass., has permitted the Acting Director of the Extended Use of Schools to incur, during the year 1914-1915, an expense not to exceed \$60 for photographs and slides showing activities in connection with the public use of school buildings. Such slides are to be utilized for the promotion of these activities.

The school board of Boston, Mass., has fixed the compensation of substitute and temporary attendance officers at the rate of \$4 per day, subject to change at the discretion of the board.

The school board of Clinton, Ia., has permitted the opening of one of the school buildings one or more evenings each month for social entertainments, moving pictures or educational programs.

With a view of economizing in school building items, the school board of New Orleans, La., recently rejected bids from local plumbing concerns for work in one of the schools. It has been found that the work can be done by the board's employees at a considerable saving.

Paid entertainments and donation days in the public schools of Cleveland, O., have been utilized for the purchase of suitable decorations for

the schoolrooms. The school board, during the past year, has not been obliged to spend anything for decoration and during the past few years has realized a profit of \$40,000 from these special contributions. The money is devoted to the purchase of pictures, statuary, magic lanterns and slides.

The school board of Boston, Mass., by unanimous vote of the members, has abolished the rule which has in the past prohibited teachers from engaging in political activities and brings to an end a bitter struggle between the teachers and the school committee. The rule has been known as the "gag" rule and in addition to prohibiting teachers from political activity, forbade attempts on their part to influence legislation for the benefit of their members, directly or indirectly, except by petition to the board. They might, however, sign nomination papers or express opinions freely outside of school hours.

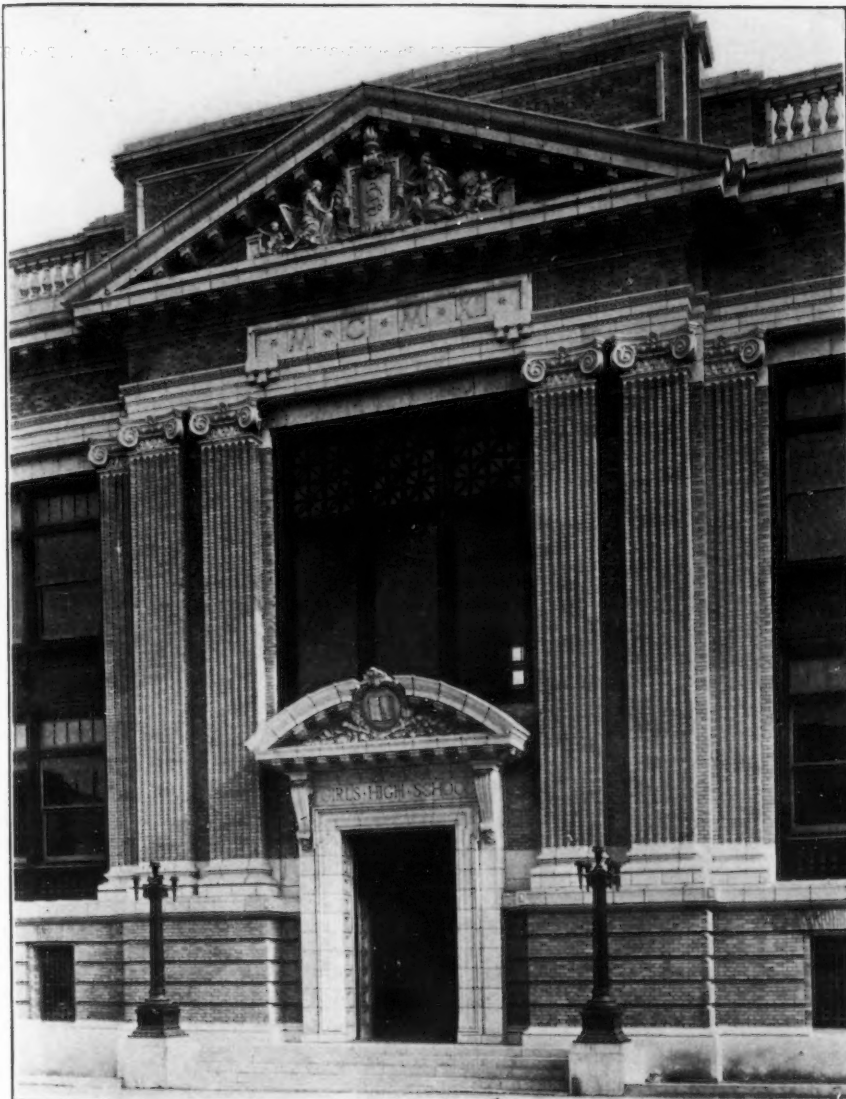
The rule was rescinded by the board in the belief that no matter how much the members had believed in the need of the rule at the time it was passed, it was an accepted opinion that the teachers could be trusted to use their best judgment in matters to which the rule referred.

A school savings bank has been opened in the Manual Training High School, Brooklyn Borough, New York City. The bank represents the first of this character in the city high schools and is under the direct charge of the business organization of the high school which also runs the lunchroom and other school activities.

The officers of the bank are appointed from among the students who expect to enter into commerce or banking establishments and one member of the faculty has general oversight of the business. Savings are accepted from five cents upward.

New York, N. Y. The board of education has sanctioned the use of school buildings for registration and election purposes, subject to the regulations necessary for the proper control of the same. One of these regulations will be the barring of smoking by those in attendance at the voting places.

Providence, R. I. The school board has raised the salary of Secretary Henry M. Rose from \$3,000 to \$4,000 per year.



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School Board Journal

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SCHOOL LAW



A legal decision of the Massachusetts Supreme Court, which is causing much concern at the present time, is that rendered in the case of Hobart K. Whitaker against the city of Salem to the effect that municipalities have no authority to appropriate money as gifts to any persons, no matter how strongly public sympathy may be moved in their favor.

It seems that the school committee of Salem had elected Mr. Whitaker to the principalship of the high school. Mr. Whitaker suffered an attack of illness thru overwork in the school and was obliged to give up his position. The school committee then granted him a leave of absence with half pay for the period of one year. The court maintains that the case would have been different if the plaintiff's tenure had been for indefinite time or for a period extending beyond the end of the year 1911. The rendering of the decision has raised some doubts in the minds of school officials as to the effect upon the practice of allowing half pay for teachers who are on sick leave. It has been customary in the city of Boston to grant leaves of absence with half pay to teachers who have become ill for a period not exceeding one year.

According to a recent opinion of the city attorney of Minneapolis, Minn., school teachers are included in the provisions of the employers' liability act, and when injured in the course of their school duties, can hold the school boards liable. Sickness and injury by lightning are excepted from the provisions of the same.

Attorney General Kelly of Montana has recently rendered an opinion to the effect that the state is not compelled to educate Indian children at state expense, except under certain conditions, namely: the children must either be liv-

ing under the guardianship of white persons or their parents must be citizens of the United States; or after having taken land under an act of Congress and severed their tribal relations.

The federal government has pursued a policy of economy regarding the education of these children, and wherever the state laws permit, it has been customary to pay the expenses of these children in the public schools. A statement had been issued by the comptroller of the treasury, however, which required that this method be modified in certain cases. It was pointed out that in those states where Indian children are legally entitled to attend public schools, any contract for the payment of such expenses would be illegal.

Assistant City Attorney A. H. Bartelt of Milwaukee has given an opinion to the effect that any taxpayer of the city may begin action to recover the money paid out for transportation of crippled children unless there is a statute expressly providing for such use of the school money. The decision has had the effect of creating some doubt as to the legality of the school board's policy of hauling children to and from a central school for cripples and has caused a discontinuance of the wagon service.

According to an opinion of Attorney General Owen of Wisconsin, a county board of education may be authorized to fix the salary of the county superintendent of schools. The opinion was given to the district attorney of Columbia county and emphasis was placed on the fact that it has been frequently held that the power to fix salaries may be delegated to minor boards or officers.

A change from a ten-payment to a twelve-payment system of paying teachers is in effect a reduction of salary, according to the New Jersey Court of Errors and Appeals.

The decision is in answer to a suit brought by two teachers against the Paterson board of education to test the legality of the board's action in substituting the twelve-payment for the ten-payment plan.

The case was appealed to the state school authorities who upheld the teachers' contention. This decision was later reversed by the state board of education, but upon appeal to the court,

a decision was given in favor of the teachers.

Thru the issuance of an order of mandamus upon the city auditor of Cambridge by the Supreme Court of Massachusetts, the teachers or that city have won their fight for the increase in salary approved by the school board in its appropriation of last November.

In compliance with an act of the state legislature, the school board had appropriated an additional levy of 25 cents per \$1,000 city valuation for increases of teachers' salaries. In advance of this action the board had also made an appropriation of \$5.00 on each \$1,000 for general school expenses. After the board had made a second appropriation the members became involved with the city authorities by the refusal of the city auditor to approve the appropriations and similar action on the part of the Mayor and city treasurer.

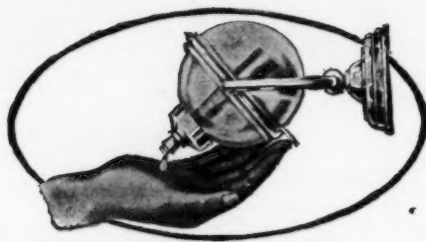
The ruling of the Supreme court compels the city auditor to approve the appropriation of \$28,000 for the increases while the Mayor and the city treasurer are obliged to sign and deliver the money to the school authorities.

Boards of school directors have the power to authorize the schoolroom to be used for summer or night schools, literary, scientific, religious, political, mechanical or agricultural societies, but are not empowered to authorize the use of a schoolroom for dancing purposes, according to a recent decision of the attorney general of Washington.

The decision has been given in answer to the inquiry of the clerk of School District No. 96 of Spokane County as to the legality of permitting schoolhouses in second and third-class districts to be opened for dancing purposes.

The corporation counsel of Buffalo has rendered an opinion that a city employe may legally teach classes at one of the city's night schools and draw pay for the extra work. "The positions, however," says the opinion, "must be distinct, because if extra services are rendered merely in the one position, no extra pay can legally be granted, excepting by full compliance with the ordinances, the general rule of the charter being that no extra compensation shall be granted to any officer or employe."

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HIRING TEACHERS.

By J. M. Pike, Superintendent of Schools,
Calais, Me.

The School Board Journal for December contains an invitation to discuss "Pirating of Teachers." Supt. Clough evidently is having his share of the troubles arising from this form of petty thievery and very naturally seeks comradeship. Possibly his position is by no means unique. I am glad to say just a word of the practice prevailing generally, here in Maine, the proper attitude of the superintendent when such instances arise, and the remedy.

In Maine the superintendents of the state are called together in annual summer school session where the sizzling caldron of questions awaits them. At one of these sessions held some years ago the question of piracy came up for discussion. I do not think any formal protest was made or definite action taken relative to this vicious practice. But there did spring up in connection with this debate the question of the wisdom of giving to teachers "general letters" or "recommendations" or "testimonials"—handing them out indiscriminately. At the time there seemed to be but one opinion. It was accordingly voted with no opposition to refrain from this practice. But it was also the sentiment of the conference that it would be highly proper to mail a personal letter to any school official named by a teacher, or to answer any questions a superintendent might ask concerning a prospective candidate.

This compact has been kept well. A few infractions have come to light, excusable perhaps on the ground that the parties were not well aware of the preponderance of public sentiment against the method. At our last conference, however, a teacher appeared before the superintendents and offered a protest against the under-

standing, together with a statement of her grounds. It was at this time, also, that a superintendent asked to be relieved from further obligation on the ground that a certain superintendent had acted irregularly by handing to a candidate a personal letter which her former superintendent had written him. But on the whole this policy acts as a tremendous lever in reducing instances of piracy. A superintendent who will not write "general" letters would not, of course, make use of them if handed him by a candidate. It is clear, then, that a teacher will not solicit a paper which she cannot use. Therefore, the requests for such documents have been reduced to a minimum.

After a teacher has signed a contract, if we receive a letter of inquiry from the outside, it is easy to assume that the teacher has been acting irregularly or the superintendent is behaving honorably by opening correspondence with us before engaging the candidate. Now in our own

city it has occurred, with one exception that a teacher, under contract, has always approached us and explained to our satisfaction that a new proposition has been made her, that it is an outgrowth of a long standing application in the new town. Nevertheless, if we insist she will stay with us until her obligations are met.

These cases have not been discovered in the state of Maine, with the exception noted above, but the superintendents of Massachusetts, Rhode Island, and Connecticut, are responsible. I think I can say, with a reasonable degree of safety, that superintendents who are constant attendants upon these conferences never steal teachers. If brother Clough would get the "boys" together and create a correct understanding among them his family quarrels would begin to lessen. Don't write "testimonials" and you have nearly overcome the practice of "pirating of teachers."

Now let us suppose an actual case should arise when, a teacher under contract, by circumstances which she neither creates nor controls, is offered a substantial increase of salary to make a change and possibly may be able to better her social prospects as well. There is a variety of contingencies, usually, brought into play to influence a teacher to violate a written obligation. A vast majority of teachers raise the question with reluctance. But when all these contingencies are brought to a focus the new outlook is so illuminated that she finds herself in a battle royal with contending forces. There occurred in our city a few years ago a point in question. We were paying a teacher a "molecular" salary, i. e., so small we do not mention it. She approached the proper authorities informing them that she had been offered a more lucrative position in Beverly, Mass. In reporting on the case I said to the committee: "If a teacher is worth \$500.00 or \$600.00 to Beverly she is worth just as much to Calais. If we cannot meet the Beverly proposition I shall never be guilty of hindering the progress of a good teacher."

The proper attitude for a superintendent to take in such cases is, it seems to me, especially if a great hardship would be worked by exacting the "pound of flesh," to grasp the teacher by the hand with "congratulations, God speed." On the contrary a teacher who plays a double game will



GEORGE W. NASH,
Aberdeen, S. D.

Mr. Nash has been elected president of the State Normal School, Bellingham, Wash., and will assume his new office August 1st.



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usually insist on a release whether or no, and you could hardly afford to retain her at any price. In discussing this attitude of the superintendent in these instances one is almost forced to ask "of what account, after all, is a written contract." It seems to me it amounts to, or becomes, a moral force sufficiently binding to cause most teachers to follow an honorable course." We should all much prefer to meet teachers in the open. One can well afford to hasten a young, ambitious, promising teacher on her way. I am going to put in a little more time hunting new teachers, writing a few more letters to prospective candidates, working just a little harder to further the interests of the great cause which we represent.

Now as to the remedy: I often wonder if we need look beyond the law of supply and demand for a complete cure of all the ills of piracy. This law is an impelling force requiring its conditions to be met or a new adjustment will be made. The strong men in governmental affairs have refused to face it; founders of gigantic enterprises and industries have fled before its mighty charge or have been left on the field. The remedy is a financial one. Readjust the salary to balance between the new position and the old. Just so long as we refuse to do this just so long do we stand in open defiance of this law and we shall have "pirating of teachers." But the matter ought to be so handled that the number of instances arising in one's own state will be found in diminishing proportions when compared with those arising from the influence of other states.

AN ATTENDANCE DEPARTMENT.

An attendance department was organized in the Jackson, Mich., schools last year. Partly as a result of the activities of this department the school census was increased 891, or over 12 per cent. When it is considered that each additional name brings to the district between seven and eight dollars annually from the state in primary school money, it will be seen that the increase is worth while if considered from the standpoint of revenue alone. But largely as a result of the activities of the attendance department the enrollment also increased, in the public schools 646, or nearly 14 per cent, and proportionately in the private and parochial schools.

The man at the head of the attendance department has oversight of the taking of the school census and of keeping the census rolls up to date by checking them against the school attendance; serves as truant officer, keeping children between the ages of seven and sixteen years in school according to law; has charge of the issuing of labor permits, etc.

A systematic campaign was conducted to secure the attendance at school of every child in the district who was subject to the compulsory education law, with the result as indicated above. All of the schools in the district, public and parochial, participated. The plan of action was threefold: First, soon after the opening of school all principals sent in lists of all the pupils then in school or known to be only temporarily absent. These lists were compared with the census

rolls and children not found to be in attendance and not out for lawful reasons were looked up and required to enter school. For convenience in checking the census against the attendance and the attendance against the census a card index of all the children of census age in the district was prepared. Second, at the close of each school month thruout the year each teacher sent in a list of all pupils entered or left since the last preceding report. These lists were checked against the card index and discrepancies noted. When the census was taken in the spring the enumerators were required to find the children who had been in school anywhere in the city or secure evidence that they were not living at the address given on the index card. Third, in the intervals between the above reports individual truants were reported according to the following plan: A card was furnished on which teachers reported such cases to the principal; the principal then notified the attendance officer by the use of postal card blanks provided for the purpose; after investigation the latter notified the principal thru the mails as to his disposition of the case; if a child were ordered to appear in school on a certain day the principal then notified the attendance officer whether or not the order had been obeyed.

At the time of the inauguration of the plan the following statement of its purpose was made to principals and teachers by Supt. E. O. Marsh:

"The success of the above plan will depend upon the careful and faithful co-operation of every principal and teacher. The law provides that 'It shall be the duty of all school officers, teachers or other persons to render such assistance as they may have at their command to aid such truant officer in the performance of his official duty.' But outside of what the law expects of us, it is highly important to every child in Jackson that he be getting an education, whether he or his parents appreciate that fact or not; and if, by carrying out the above plan, we succeed in getting into school as many as possible of the children who ought to be there, and at the same time help to secure that regularity of attendance which is essential to successful school work, we shall all feel that we have accomplished a worthy task."



MR. I. B. BUSH.

Supt. Schools, Parkersburg, W. Va.

Mr. Bush has been elected superintendent of schools at Erie, Pa., to succeed H. C. Missimer, resigned.

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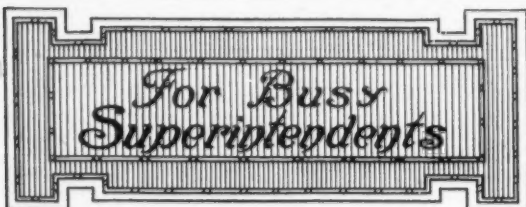
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Supt. Ernest L. Thurston of Washington, D. C., has inaugurated weekly meetings of the supervising principals and officials of the higher administrative offices to discuss the workings of the public-school system.

In accordance with the suggestions of Supt. F. B. Dyer, the school board has requested the formulation and presentation, from time to time, of reports on changes and rearrangements in the elementary course of study which will give effect to the following policies:

1. A greater emphasis upon essentials.
 2. Simplifying the course of study by the exclusion of obsolete and unimportant matter.
 3. A clear differentiation between those facts that are required to be memorized and others of less permanent importance or of an illustrative nature.
 4. The establishment of definite standards of attainment on each subject in the several grades.
- Supt. W. K. Dwyer of Anaconda, Mont., has recently put into operation in the schools a "minimum essentials" system. The aim of the plan is to establish in the minds of the students the essential things which they must master in each grade. Arithmetic and grammar are the chief items covered and each grade is provided with blank forms upon which are questions which are to be answered and returned to the teachers. Time tests are given at intervals to ascertain the rapidity with which the problems are solved.

Tests of school children in mentality, thru the use of the Binet tests, have been recently conducted at Detroit, Mich. The tests were begun following responses to an announcement in the daily papers that children who might be brought to the board of education rooms would be tested and the results announced to the parents.

The results showed that in most cases there were good reasons for undertaking the tests. A

number of the children were mentally undeveloped for their age, some were normal and two or three were above their age in mental requirements. The tests will be continued weekly on Saturdays.

With the opening of the second semester, Supt. S. J. Slawson of Stamford, Conn., has put into operation a double promotion system for the grades and high school. The plan provides for the division of all grades into two sections designated as A and B. Promotions occur twice each year, in February and June, and all students advance from a lower to a higher class or from grade to grade. Promotions are made upon the basis of merit and those who are not capable of doing advanced work are held in the lower class.

With the operation of the plan, it follows that students of the higher class in the eighth grade are graduated in February while the lower class is graduated in the following June. In the high school, the same plan applies with the exception that the students of the senior year complete their course during the midwinter term and therefore must forego graduation until the following June. The benefits attributed to the plan are that pupils who are exceptionally capable are able to advance as fast as their ability permits while those who are not able to advance as rapidly may be held back.

Following a number of complaints from local businessmen, the school board of Lyons, Ill., has raised the standard for high-school students in spelling and writing. Before a student will be permitted to receive a diploma it is required that an average of 90 in spelling and 85 in writing must be attained.

The school board of Racine, Wis., has taken steps to provide vacation schools during the coming summer for the benefit of pupils who fall of promotion. Pupils will study in the open air.

Thru the initiative of Supt. L. B. Evans, a "fire drill" week was observed in the public schools from February 22 to 28. Principals were instructed to place in a conspicuous place in their offices the number of the nearest fire station. Fire drills were conducted and an effort made to perfect the method of procedure. At the drills records were kept of the time in each school.

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Acting upon the recommendation of Supt. Henry W. Harrub, the school board of Taunton, Mass., has adopted the eight-grade system with a sub-freshman high school.

It is planned that the essentials of the nine-year course will be covered under the eight-year plan as little advanced work may be undertaken in the former because of the reviews of preceding work.

The sub-freshman class will be divided into two sections with reference to the prospective opportunities for training the individual pupils: (a) those intending to take a college or technical course, (b), those seeking vocational training.

The board of control of athletics, of the Chicago school board, has adopted a rule that limits the age of athletes in the schools to twenty years. This limits competition to those not over the prescribed age. Students are permitted to compete in both track meets and baseball during one semester.

A feature of the new rules is the elimination of the running broad jump and the hop, skip and jump among senior and junior high-school students. The two-lap run, equal to 352 yards, has been substituted for the 440-yard run. Indoor baseball has been continued as an athletic sport.

Missoula, Mont. The office of assistant superintendent of schools has been created with the appointment of Miss Alma Binzell. The assistant has been provided in line with the growth of the schools.

River Falls, Wis. The title attached to the head of the city school system has been changed from supervising principal to city superintendent of schools. The change takes the schools out of the control of the county board of education. Mr. H. C. Almy has been named superintendent.

In compliance with an order of the board, Supt. F. B. Dyer of Boston, Mass., has inaugurated two rapid advancement classes in the Lewis District.

According to a report of Supt. Robert I. White of the public schools of Elgin, Ill., girl students in the high school have a better record in scholarship than boys. The girls show an average of 97.3 per cent in class work, while boys attained a mark of 90 per cent. Of the 2,103 studies

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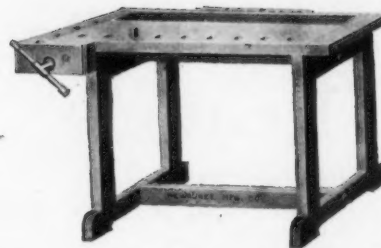
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taken by girls, during a semester, 2,046 were passed successfully. Boys took 1,613 subjects and passed in 1,448.

In the grade schools 94.5 per cent of the pupils were promoted. Of the 3,083 pupils in the grammar grades, 2,089 were promoted.

During the February enrollment there were 3,777 pupils in the schools with 815 in the high school. There were 1,897 boys and 1,880 girls in the grammar and high schools.

A committee has recently been appointed by State Superintendent Wm. P. Evans of Missouri to undertake an investigation of the rural and city elementary schools with a view of improving the teaching methods in the lower grades. Among those who will be actively engaged in the unearthing of school facts are the following well-known schoolmen: Supt. Herbert Pryor, Mexico; Supt. J. A. Whiteford, St. Joseph; Supt. I. I. Cammack, Kansas City; Supt. Livingstone McCartney, Hannibal. One of the problems to be considered will be that of obtaining better teachers for the graded schools.

Upon the recommendation of Supt. Charles Johnson, an official investigation of the public schools of Coeur d'Alene, Idaho, has been undertaken by State Commissioner Edward O. Sisson. Dr. Sisson will make recommendations and advise changes where necessary.

Madison, Wis. The extension division of the University of Wisconsin has announced the creation of a library of educational films. The Division will loan the films to schools and social center workers thruout the state.

Thru the efforts of Supt. D. L. Paisley and Principal E. H. White, a school savings bank has been put into operation for the public schools of Argenta, Ark. The bank has been organized on the stockholding plan. A total of five hundred shares has been distributed among the school children, each share representing the sum of one dollar.

Officers from among the pupils have been elected for the conduct of the business. These serve without pay and must furnish bonds approved by the school board. The expenses in connection with the conduct of the bank involve merely the cost of books and the necessary blanks.

Pupils of all the schools are expected to deposit their savings in the school bank and also to take out a share of the stock. All moneys not out on loans are deposited daily in the local city bank and interest is paid by the bank officials. Depositors will be protected by the bonds of the bank authorities. The new plan gives children an opportunity of acquiring a savings account and at the same time brings them in direct contact with banks and banking methods.

The latest report on school savings for the public schools of Minneapolis, Minn., places the total deposit at \$40,695 with 24,725 accounts under the students' names. New accounts opened during the year reached 10,486 with a representation of 59 schools. One year ago there were 22,996 accounts and a representation of 59 schools. New accounts amounted to 8,021.

PERSONAL NEWS OF SUPERINTENDENTS.

Supt. J. M. Markel of Buhl, Ida., has been re-elected for a fourth term. During his incumbency, Supt. Markel has been responsible for the introduction of Agriculture and Domestic Science in the schools.

Dr. Horace L. Brittain, who was at the head of the school survey work in Ohio, has been appointed managing director of a new municipal research bureau just organized at Toronto, Canada, at a salary of \$6,000.

Dr. Brittain entered his new work March first. The bureau is the first of the kind to be established in Canada, and under its charter it is authorized to operate in all parts of that country.

Mr. W. K. Tate, of the South Carolina State Department of Education, has resigned to accept a professorship in Peabody College, Nashville, Tenn.

Bismarck, N. D. Supt. C. C. Root has been re-elected with an increase of salary of \$200. In re-electing him the board of education expressed their satisfaction of his work as an educator and administrator. Mr. Root is president-elect of the North Dakota City Superintendents' Association.

Mr. D. L. Paisley of Argenta, Ark., has been elected for his fourth term as head of the Argenta schools, with a substantial increase in salary. The Argenta schools have made remarkable progress during Mr. Paisley's incumbency. Two school buildings have been erected under his supervision; the high school has been changed to a four-year course and departments of domestic science, manual training, music and natural science have been added.

Dubuque, Ia. Supt. J. H. Harris has been re-elected.

Supt. H. E. Inlow of Forest Grove, Ore., has been re-elected as head of the public schools.

Supt. Otis Randall of Moscow, Ida., has been re-elected as head of the public schools at a salary of \$2,000 per year.

Supt. E. L. Cherry of Waterville, Wash., has been re-elected for a third term. During Mr. Cherry's incumbency the enrollment in the high school has more than doubled and the salaries of teachers have been placed on a systematic basis.

Supt. B. R. Crandall of Idaho Falls, Ida., has been re-elected.

Moorhead, Minn. Supt. H. R. Edwards has been re-elected for a fourth term at a salary of \$2,100.

Francis Cogswell, for fifty years a teacher and superintendent of the Cambridge public schools, died March 3 after a brief illness caused by the infirmities of advanced age. He was 87 years of age and had retired from active teaching work about nine years ago. He was one of the best known educators in Massachusetts and was prominent as a resident of Cambridge. During his activities he became noted for his tact in dealing with children and his ideas in teaching.

Born in Atkinson, N. H., Mr. Cogswell was given his early education at Atkinson Academy and began his work in Cambridge as master of the Putnam School in 1854.

In 1874 he was elected superintendent of schools and remained longer in service than any other educator in New England, resigning in 1905.

Mr. Cogswell contributed extensively to educational publications and was a frequent speaker at educational conventions. Harvard College honored him with a degree of master of arts in 1861. During the later years of his life there were many occasions when citizens, public officials and teachers wished to show their appreciation of his work by presenting works of art.

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In Book Three, the selections given include Rip Van Winkle, Evangeline, The Great Carbuncle, Abridgments of Little Nell and Nicholas Nickleby, As You Like It and King Lear (Lamb's Tales), Poe's The Bells, The Bells of Shandon, Afton Water, Sir Galahad, Crossing the Bar, The Barefoot Boy, Planting of the Apple Tree, A Day in June, The One-Horse Shay, Paul Revere's Ride, Patrick Henry's Speech in the Virginia Legislature, Kentucky Belle; Stories of Norse, Greek and Roman Myths, Lohengrin and Elsa, Beowulf, Romulus and Remus, Wanderings of Aeneas, Hengist and Horsa, Stories of King Arthur, Stories of Old Rome, Alexander the Great, Stories from American History; Stories of American Industries.

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VOCATIONAL EDUCATION

The need of vocational training in the public schools was discussed at a recent educational convention by Dr. E. Holovtchiner, formerly president of the Omaha board of education.

Dr. Holovtchiner argued that the present schools, as organized, do not make children industrially efficient and do not meet their full opportunities for service to the state and to the individuals. The children who graduate from the elementary schools and who enter the high schools are well trained to meet all of their future economic problems. Those who do not continue their education, must be provided for, said the Doctor, "by some vehicle by which to give them the kind of instruction they most require and which will meet economic conditions. We must provide a plan whereby the work in the elementary schools shall train the hand as well as the mind."

Manual training for mere stimulation of intellectual effort, and without regard to its industrial effects, is doomed to failure according to Dr. Holovtchiner. "Thru manual training we are able to discover those who have any aptitude for mechanical pursuits, and separate them from those who are inclined to other vocations. Two different and distinct types of schools and schooling are needed. The academic where general education is given with the ultimate view of preparing the boy or girl for professional career, and the industrial, technical, mechanical, or trade school for the purpose of giving the boy a training that will fit him to enter life with something to make him a bread-winner, a productive and self-supporting citizen as soon as he leaves school.

"Manual training, which was introduced a decade and a half ago, had this ultimate training dimly in view, but like any other innovation, it had to be experimented with, and go

thru a process of evolution until it has gradually perfected and developed itself into a system which stands out prominently in our educational world today in the form of vocational schools.

"The evolutionary stages had by no means easy or smooth sailing; even today the minds and views of educators are by no means unanimous as to the ultimate plans of industrial training. Some educators advise that only such trades should be taught as will apply to local needs. For instance, in Wisconsin woodworking should be the chief element of training; in Pennsylvania, machine work should be taught.

"I cannot agree with this plan, as boys do not remain fixed in one locality. A Wisconsin boy is apt to seek employment in Pennsylvania, or vice versa. But no matter which industry is taught in such schools, such subjects as English, mathematics, drawing, geography, history, etc., should also be taught. But it must not be of a general character as in our academic schools; it must have distinctively the industrial character applicable to various industries. The Rochester school, which is called "Shop School," is training the boys along the general lines of industries, giving them the fundamental principles of certain trades thruout the entire course, but not specializing them. I cannot agree with such plans either.

"While the boy in the first year is given the general principles of various trades, he will soon find out which trade he prefers. Why not teach him the chosen trade after his first year of apprenticeship? Manual training, as given in the graded schools, is so to speak, the separator of the technically inclined boy from the one who has academic inclinations. So should the trade school, after giving the boy first the general principles of various trades, be the guide in

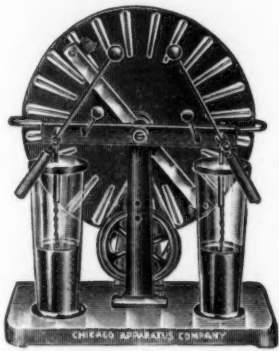
selecting the trade he chooses and prepare him for it.

"Which academic courses should be offered the boys, how to divide the periods, what methods to apply, the length of the school day, all these things should be left to the superintendent of instruction in each locality.

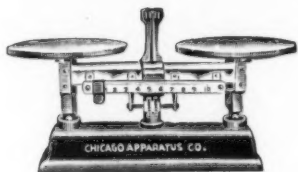
"We shall bump up against the same obstacle as we do in the grade school, altho not to such an extent, and that is truancy or dropping out before the completion of the course. Laws will have to be provided to prohibit shops from taking in boys before they are thru with school, or labor unions should refuse the boy admission to the ranks of the union unless he has a certificate of his completion in the vocational school.

"Some fear is expressed that technical or trade schools will, in a measure, lead to the abandoning of the academic work. I think there is absolutely no occasion for alarm. In the first place, academic work should never be excluded. On the contrary it should be insisted upon, only in a different way. These schools should not be looked upon as a refuge, or an asylum for mentally deficient. Brains are as necessary for workers in the trades as for professional men, and industrial students should be cultured as well as students in academic high schools. As President Eliot said: 'If a man practice blacksmithing studiously, or agriculture thoughtfully, he is getting culture.'

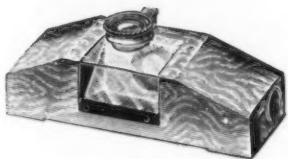
"Technical high schools are needed in this country and are needed badly. Germany, which ranks higher than any country in the world for its schools, universities, academies, etc., is also leading with her industrial schools. She is abundantly supplied with them and her mechanics are recognized the world over for their skill and intelligence. In Sweden, industrial or technical education is likewise a prominent feature, and her mechanics rank among the highest in the old world. No wonder that the foreign mechanic is given preference in this country before the American."



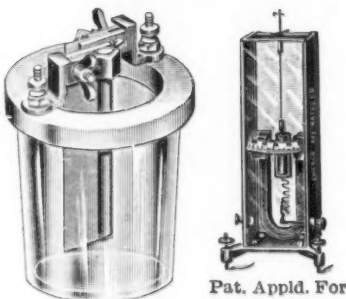
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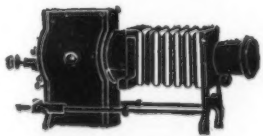
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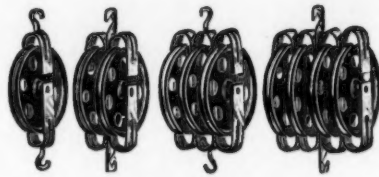
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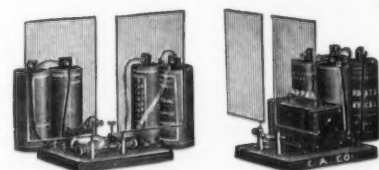
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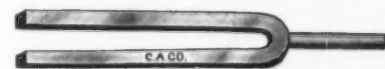
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Official Position

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Name of School
(School Board Journal-Jan.)

Playgrounds for School Yards



There is an increased realization that school yards should be put to use during the hours when school is not in session. It is obviously a waste of space and public money to have the school yard unused after study hours.

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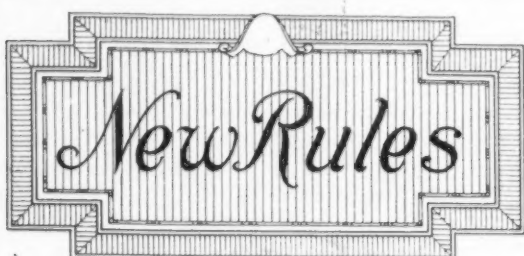
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High-School Functions.

The school board of Idaho Falls, Ida., upon the suggestion of a number of school patrons, has adopted a set of regulations to govern school functions. The rules read:

1. School classes shall be limited to two social functions, as class affairs, during the school year. (One in each semester.)
2. Interclass functions shall only be held at such times and places as will meet with the approval of the faculty.
3. No levy shall be made from the members of the class to cover any expenses incurred.
4. The funds for such class functions, or any other school affair, shall be by voluntary contribution, raised previous to the holding of the functions and with full knowledge and consent of all the parents.
5. No class or high-school function shall be planned without first consulting the faculty advisors or teachers, and securing their consent.
6. All parties are to be held at reasonable hours, with the faculty advisors or teachers in attendance, and such gatherings shall adjourn at 11:30 p. m. Faculty advisors or teachers are given authority to see that this is enforced and will be held responsible for the enforcement of this rule.
7. Any school affairs not in compliance with these rules are not school functions, and the school authorities do not recognize them as such and disclaim any responsibility.
8. Parties shall be held on Friday and Saturday nights, and not during the school week.
9. Grade functions must only be held at such times and places as shall be approved by the superintendent and principal of the buildings.

10. Classes or other school organizations violating these rules are subject to indefinite suspension by the board and may be reinstated only by consent of the superintendent and principal.

11. Instructors or teachers encouraging the violation of these rules or acting in the capacity of class advisor and violating these rules will be subject to suspension from service by the board.

Rules for Use of Buildings.

The school board of Peoria, Ill., has adopted regulations to govern the use of the school buildings for public entertainments. The rules are as follows:

The use of the building may be allowed for caucuses, school caucuses, meetings of mothers' clubs, parents' clubs, Child Welfare league, gymnastic club and any other society or club having for its purpose the welfare of the children attending the school, school entertainments and teachers' club entertainments, free of charge, and for meetings of such other societies, individuals or clubs and lectures, non-sectarian and non-political in character as may desire to use rooms in such school buildings or the auditorium thereof, upon payment accompanying the application, for such use of at least three dollars (\$3.00) per evening, and as much more as the school inspectors of the ward in which the school to be used is located, shall elect. Provided, however, that if the privilege is given to any society or club to meet regularly, weekly or monthly, such club or society shall give way before request of the inspectors of said ward, if such regular meetings interfere with any other public affair to be given on such regular evening.

All applications for such purposes shall be accompanied by the amount aforesaid and directed to the secretary of the board, upon blanks furnished by such secretary. The secretary shall immediately, upon receipt of such applications, turn over the application to the inspectors of the ward in which such meeting is to be held, and such inspectors shall endorse upon such application their approval thereof, and may by both of said inspectors consenting, disallow any such applications, and in case of disagreement as to whether such application shall be allowed or rejected, the president of the board shall cast the deciding vote by indicating upon such application

his approval or disapproval of the same.

The janitors of the respective schools shall attend during the entire session of all such meetings or entertainments, and shall exercise their special police powers during such, and shall allow no smoking of tobacco, chewing, spitting on the floor or use of obscene language in such school building, and may eject any person or persons who may attempt to do so after being notified to desist.

The janitor shall make a written report to the secretary of the board on the day following such meeting of the character and conduct of the same, or any damages that may be done to the building or any of its furniture.

All applications, whether with or without charge, shall be made in writing and signed by at least five voters of the district wherein such meeting is to be held: two of them, at least, shall be property owners, and shall agree that in case of any breakage or any damage to the building, or any of its contents, that they will pay for the same.

The attorney of this board shall prepare the form of application in accordance with the foregoing, which the printing committee shall cause to be printed, copies of which shall be kept in the office of the secretary.

The janitor of the school in which such meeting shall be held shall receive two-thirds of the amount received by the secretary, and the other one-third shall be placed in the treasury of the board as a credit to the light account.

Fire Drill Rules.

Lewiston, Me. The school board has revised the rules relating to fire drills and has substituted the following regulations:

Dismissal call: Three strokes of gong, repeated twice with pause between each repetition.

Teachers go immediately to door and open it. Girls form lines at rear of room, boys at front, ready to pass out together. All classes ready in 10 seconds. (In cold weather take wraps if needed.) Janitor stands on first floor near front stairs. Floor signals: One stroke, first-floor classes leave building rapidly by nearest exit. At two strokes, second-floor classes leave by nearest stairway. At three strokes, third-floor classes leave by nearest stairway. Classes pass down,

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two abreast, without hurry, crowding or pushing, and out by nearest exit. Drill shall be so arranged that lines of pupils do not intersect. Teachers lead classes, monitors march at end of line, and see that no pupils are left in classroom. Each class starts down stairs when end of class in front reaches first landing—pupils march directly away from building. The order of exit to conform as nearly as possible to the regular form practiced in passing out at close of sessions.

Other details: All doors shall be unlocked, and gates unlocked and hooked back, during school hours. Train all teachers to give signals. Call fire drill at least once every two weeks. Report every drill to School Superintendent, giving form of drill, and time elapsed between first signal and exit of last person.

All waste paper, excelsior and every kind of refuse shall be placed daily in a metallic can in the basement of the building after the close of afternoon session.

RULES AND REGULATIONS.

Under the initiative of Supt. H. B. Wilson and Principal A. J. Stout, an effective bar has been placed upon fraternities in the high school at Topeka, Kans. A rule has been passed which provides that suspicion of relationship with such organizations will be deemed sufficient reason to bar students from holding positions of honor in the school including class offices and positions on the staff of school papers, athletic teams or class plays. Students have been urged to co-operate with the school authorities in keeping within the law with regard to fraternities.

Milwaukee, Wis. The school board has amended its rules by adding the following section to the chapter fixing the duties of the superintendent:

"The Superintendent of Schools shall also have general authority over and responsibility for the work of, all other departments or employees, whose duties are primarily in connection with the work of instruction or with the teachers and pupils in the schools."

The school board of Monroe, Mich., has adopted a new set of rules to govern dances and other social activities in the high school. The rules read:

1. All high-school suppers should be prepared in the school kitchen as far as possible.

2. All dances given by the school in the high-school gymnasium shall close at ten o'clock on all evenings except Friday and Saturday evenings, and at eleven o'clock on those evenings.

3. At all dances, given at or in the name of the school, a member of the faculty or other person duly appointed, shall be present in the capacity of chaperon or censor, and that all immodest dancing shall be prohibited.

4. Expenses covering all school dances shall be kept as low as possible and within reason.

Following the discussion of the public use of school buildings by the school board, Supt. F. K. Congdon of Northampton, Mass., has formulated a set of rules governing the same. The rules read:

"The superintendent is authorized to grant the use of the schoolrooms and the hall in the high-school building subject to the following regulations and restrictions:

"1. The use of these rooms shall be free to all high-school students' organizations when approved by the headmaster, and to all high-school alumni and public school teachers' organizations. These organizations shall be allowed to charge admission.

"2. No organizations except those mentioned in paragraph 1 shall be allowed the use of any part of the building for any meeting to which admission is charged.

"3. No organizations except those mentioned in paragraph 1 shall be allowed the use of any part of the building unless they are distinctly educational or philanthropic in character and not then unless any citizen who wishes may become a member or attend the meetings without paying a membership fee. If the superintendent is in doubt as to whether any particular organization should be granted the use of any part of the building under these rules, he shall direct the representatives of the organization to present a written request to the school committee stating in full the grounds upon which such request is made.

"4. No rent shall be charged any organization for the use of the building but the extra expense of heating, lighting and caring for the rooms while they are in use shall be collected in advance by the superintendent and turned into the office expense account, except the janitors' fees,

which shall be paid by him to the janitors who have done the work."

The school board of Detroit, Mich., will in the near future pass on a rule, formulated by the teachers' committee for the disbarment of all entertainments in school buildings, educational or otherwise, to which admission is to be charged. The regulation has been proposed as a remedy for the condition which has developed where a number of requests have been made for such use of the buildings.

The school board of Boston, Mass., has amended the rules relating to the admittance of children to the kindergartens. The revised rules read:

Children of four years of age and upward may be admitted in the order of application to those kindergartens which are most convenient for them to attend, and in which there is sufficient accommodation, provided, the principals of districts may, with the approval of the assistant superintendent in charge, decline to admit children to kindergartens when the number in attendance exceeds fifty.

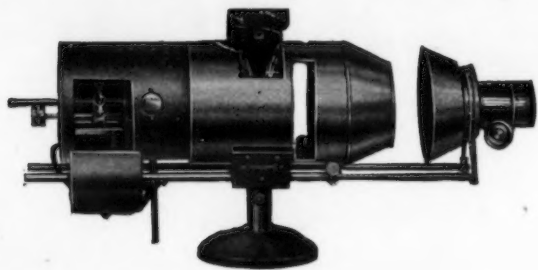
No child who shall be less than five and one-half years of age on September 1 in any year shall be admitted to the first or higher grade during that school year, and no child under seven years of age shall be admitted to the first grade after November 1 in any school year.

A record will be kept of all applicants who have been refused admission to the kindergartens or to the grades under the provisions of this section.

At a recent meeting of the Washington State Board of Education, a number of regulations were passed governing the character and method of conduct of examinations for the schools of the state. As a means of securing uniformity in eighth-grade examinations, it has been ruled that superintendents of schools in cities of more than 5,000 population must submit to the state superintendent all questions for examinations. Cube root and mensuration of solids have been designated as proper for examinations in eighth grades.

Requirements for high-school graduation, according to the board, will in the future, consist of fifteen units instead of sixteen as formerly. It is recommended that the courses of study in the ninth grade be limited to three. The former number of courses has been four.

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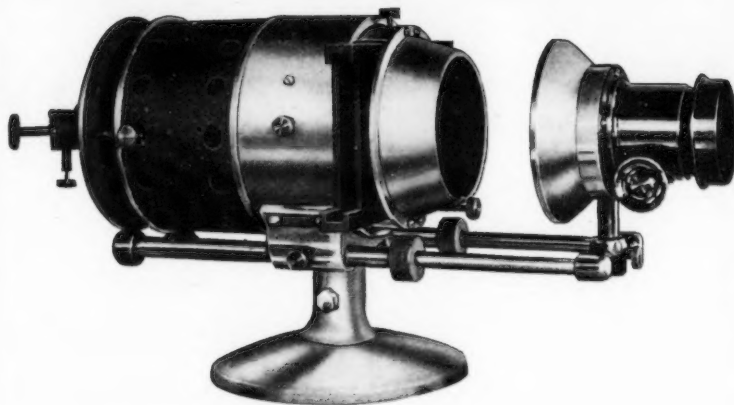
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With a view of obtaining more regular attendance, improved deportment and a saving of the time usually devoted to examinations, State Superintendent J. A. Churchill of Oregon has formulated a set of regulations to govern these details of schoolroom practice. Provision is also made for those pupils who have left the grades and who at a mature age wish to re-enter the higher grades. The rules, as outlined, provide for these conditions as follows:

Pupils in the public schools of the state of Washington who have passed the age of 14, have completed the regular eight-year course of an elementary school and who can present to the county or city superintendent evidence of having successfully passed at least 450 days' attendance in the grammar grades of a school with an average of not less than 85 per cent in deportment, may be excused from examinations in those subjects in which they have made an average of not less than 90 per cent in class work and school tests. The county superintendent is authorized to grant the exemptions upon the recommendation of the principal or teacher in charge.

Pupils who have completed seven years of the elementary school course and can give evidence of having passed at least 450 days in attendance in the fifth, sixth and seventh grades with an average of not less than 85 per cent in deportment, may be excused from examinations in geography provided an average of not less than 90 per cent in class work and school tests has been attained. Pupils who have taken six years' work and have an average of 85 per cent in deportment may under the same conditions be excused from physiology examinations.

For the benefit of students who have left the grades and desire to re-enter the schools after reaching the age of 18, it is provided that at the discretion of the school board, such pupils may be admitted to any high school without having passed an eighth-grade examination. Upon receiving three semester credits, such students may receive the eighth-grade diploma from their respective districts.

A new rule of the Boston school board prohibits pupils from engaging in athletic contests or

games with schools outside of the city. The approval of the director of hygiene is required on all games and contests.

Detroit, Mich. As a preventive measure, the board of health and the school board have adopted a rule which bars from school attendance all children coming from a family where a contagious disease exists and who have no certificate showing they have had the one in question. In the past only the sick child has been excluded.

Albany, Ore. The school board has passed a rule prohibiting balls or dancing parties in which the name of the school, class or organization is used. The rule is the result of the violation of an order that in such affairs the name of the school or class be not used.

The school board of Philadelphia, Pa., has adopted a resolution barring janitors and other school employees from the payment of assessments for, and participating in, political activities. It has been found that altho the schools are apparently free from political or party manipulations, the practices of political-ruled school days have been continued in some sections of the city.

The school board of Cincinnati, O., has passed a rule that all improvement associations, which use the auditoriums in school buildings for meetings, must pay the services of the janitor for work performed on the night the room is occupied. The fee amounts to approximately \$2.35.

The school board of Everett, Wash., has passed a rule permitting pupils of the parochial schools to receive instruction in any of the vocational departments of the public schools. Students who apply for admission to these departments must have conformed to the state compulsory laws.

VOCATIONAL HIGH SCHOOL IN DUBUQUE, IA.

Dubuque has established a Vocational or Industrial High School. The old Prescott School, which has given way to the new Prescott building for the elementary grades, has been repaired and redecorated, and in it have been placed the commercial department of the high school, the

department of Household Economics, and the manual training department. The entire third floor is occupied by the commercial department, affording it ample and most convenient quarters.

The entire second floor is occupied by the departments of domestic science and art—two large rooms, a cooking room and a dining room, are set aside for domestic science; and two rooms, equipped with sewing machines and sewing tables, are assigned to domestic art. These four rooms are newly decorated, well-lighted, and give the department abundance of room, and ample opportunity to carry on its work with effectiveness.

The first floor is occupied by the woodworking shops of the manual training department, and is splendidly adapted to its purpose. It will make possible also a considerable enlargement of the field of activities of this department.

One hundred students from the high school, in addition to the upper grammar grades in the Prescott School, are accommodated for industrial and vocational work in this building, and it promises in the near future to become the center for all work and activities of this character. Its establishment marks another distinctly forward step in the progress of the Dubuque schools.

A STYLE SHEET IN ENGLISH.

Under the direction of the Board of Regents of Normal Schools, a Committee created by the English Conference of the Wisconsin Teachers' Association has compiled a Style Sheet, which gives brief, clear rules concerning the more common matters of general usage. It is published in two forms: first, a four page folder, intended for teachers; and second, a single sheet intended for students in high schools, normal schools, and county training schools, and suitable for pasting on the inside of covers of loose-leaf notebooks.

Superintendents or principals who desire copies of this style sheet, may obtain all they require free of expense, except cost of expressage or postage, by writing C. R. Rounds, in care of Normal Regents, State Capitol, Madison, Wisconsin. They should indicate clearly how many teachers and how many students they wish to supply.

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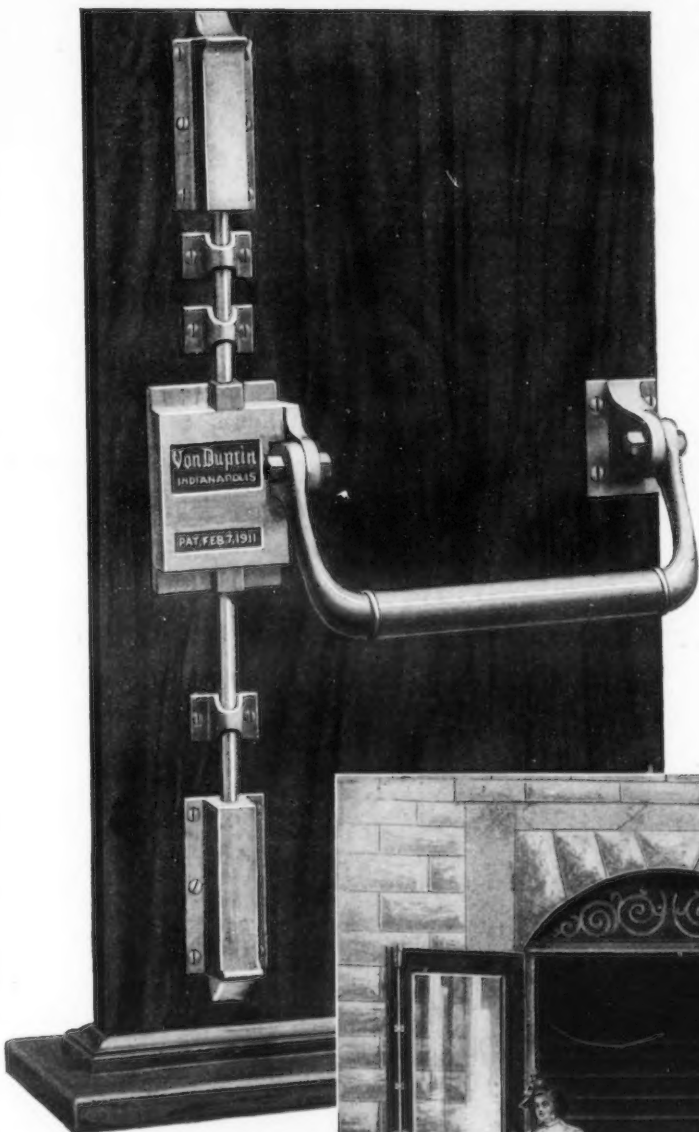
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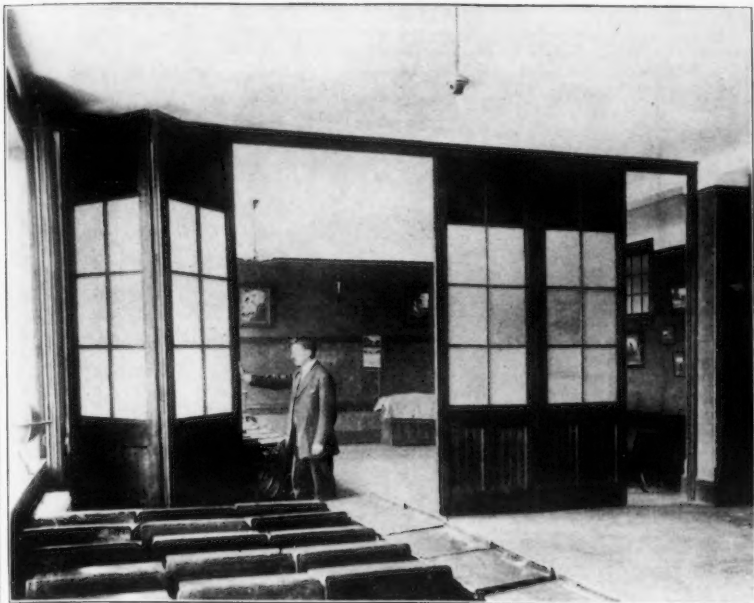
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lation in a school. The next question: "Would not such accounting lead to a standardizing of equipment and methods?" elicited answers which showed that the subject was not clearly appreciated by the writers. Fifteen answered in the affirmative and four in the negative.

A payroll is prepared by the school authorities in 28 of the 30 cities. Of these, 26 replied that the names of employees appeared on the lists while four omitted the same.

The question: "Do employees sign the payroll?" was answered in the affirmative by twelve cities; seven answered in the negative and eight paid by check.

The answers to the questionnaire reveal the fact that there are two marked divisions into which these cities fall. The first group is composed of those where an effort is made to separate the superintendent's office from that of the business manager. In the second class, among which Jamestown is found, the combined office of business manager and superintendent of schools is still in existence.

Special attention is directed to the cities in which a systematic attempt is made to keep on record an account of each separate item of cost and upkeep for the schools. Cedar Rapids, Ia., Auburn, N. Y., Erie, Pa., Grand Rapids, Mich., East Orange, N. J., Rochester, N. Y., Asbury Park, N. J., have detail cost systems.

Jackson, Michigan. The policy has been definitely adopted of procuring school sites of not less than a city block in area. Three such sites have been purchased during the past year, and at a cost of \$32,000 four lots have been added to another site, giving it a total area of nearly two entire city blocks.

On one of the new sites a \$60,000 building has been erected which is considered a model elementary school of the type that is found in smaller cities. It contains but eight regular classrooms, but kindergarten, manual training and domestic art rooms, library, auditorium, gymnasium, baths and other special features render it unusually well planned and equipped for elementary school purposes. Its appearance architecturally is exceptionally fine, and it has been planned with a view to future enlargement which will double or treble its present capacity.

On the large lot mentioned above is to be placed an intermediate school to accommodate grades seven, eight and nine. The taxpayers have recently authorized an issue of \$300,000 of bonds for the erection of two such schools in different parts of the city.

TEACHERS AND SCHOOL ADMINISTRATION.

The Illinois State Department of Public Instruction has compiled some interesting statistics concerning the length of service and the salaries paid to teachers. According to these statistics, there are in Illinois 30,560 teachers, of whom 5,609 are men and 24,956 are women. One-third of all the teachers in the state or 10,958, have been in the service in the same district one year or less; one-sixth or 5,104, have been in the service of the same district less than two years; one-fourth have been in the same district twenty years or more. More than two-thirds of all the teachers have been in the same community five years or less.

The average annual salaries paid to teachers, during the past school year, were \$662.07. The men received an annual average wage of \$772.07 and the women an average of \$643.70. Of these, 412 received less than \$200; 2,723 less than \$300; 5,377 less than \$400; 6,485 less than \$500; 2,831 less than \$600; 2,305 less than \$700; 1,529 less than \$800. One hundred seventy-two teachers received \$3,000 and over. The male teachers are most numerous in the class receiving from \$700 to \$1,400 and the women are most numerous in the class receiving from \$500 to \$1,000.

The Washington State Board of Education has passed a rule requiring that teachers who seek positions in high schools of the state must be college graduates. Teachers of special subjects such as manual training are not included.

With a view of rendering the greatest service to students and teachers preparing for the profession of teaching in the normal schools, the State Board of Normal Regents of Wisconsin has reorganized the conduct of these schools. The changes involve the organization and segregation of groups of students for the specific training needed for the work upon which they are about to enter.

Each of the normal schools in the state, with

the exception of Milwaukee, will offer a five-year course to students who have not had a high-school education.

The Milwaukee Normal School, in accordance with the provisions of the board will, next fall, offer special courses for students preparing for teachers' positions in high schools and normal schools and for principalships in grammar and high schools.

The changes will involve the separation of students preparing to teach in the primary, grammar and high schools and those seeking positions as principals. The course for high-school teachers will offer three years' training while that for primary and grammar-school instructors remains two years.

A training school for teachers of exceptional children in the state of Michigan will open at Lapeer, in July, for a six weeks' term. The school is the fourth to be established in this country and seeks to instruct teachers in the methods of teaching backward pupils. The sessions will be held in the Michigan Home and Training School and board and room will be provided.

Among the well known instructors will be the following: H. A. Hayes, medical assistant of the Michigan Home and Training School, Lapeer; C. S. Berry, assistant professor of education, University of Michigan, Ann Arbor; Fred L. Keeler, state superintendent, Lansing. Henry L. Stoddard, psychologist and head of the exceptional school at Vineland, N. J., will lecture.

The school board of Philadelphia, Pa., has adopted a new promotion rule for teachers which provides for a single list of eligible persons. The plan abolishes the former separate lists of men and women. As a result, most of the future promotions will go to women instructors because of the fact that 4,482 teachers in the schools are women and only 570 are men.

The dual lists of teachers have been in existence in the Philadelphia schools since 1896 and during this time it has been the custom to select women for the primary schools and men for the conduct of boys' classes in unit schools. Recently, however, the bar to women teachers in boys' classes has been slightly relieved and women have been placed in competition with the men instructors who had been certified.



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A HELP-YOUR-OWN-SCHOOL CAMPAIGN.

The village of Mendham, N. J., was recently the scene of a lively and successful campaign conducted by Mrs. Seymour L. Cromwell, a member of the board of education, to obtain an increase of \$1,072.72 in the school fund. Mendham is a village of only 1,129 inhabitants, but Mrs. Cromwell's campaign would compare well with the most elaborately planned movement in a large city. It closed on the evening before the election with a lantern slide lecture and moving picture show in which the needs and shortcomings of the local school were forcefully presented, with a liberal addition of genuine fun.

For two weeks previous to the election, every taxpayer in the village received, at the rate of three a week, a small "help-your-own-school" post card bulletin, sent out by the board of education and Mrs. Cromwell with money given privately for the purpose.

The taxpayers were told, among other things, that Mendham has wasted in preventable ways, enough money to secure all the additional teachers and equipment which the school needs so badly. Some of the preventable waste is the failing of children to pass their grades and the necessity of taking them over and over the same ground.

The first of the bulletins simply announced the series and requested suggestions for the betterment of the school and questions concerning its management. The second bulletin treated of the wastes and losses of the school by asking such pertinent questions as the following:

"Have you realized that you have wasted \$8,994.50 on the repeating of grades by all the children now in school, not counting the high-school pupils?"

"Have you realized that these pupils altogether have wasted 230 years of their time by taking over grades a second time, instead of going to a new grade each year?"

"Have you realized that 113 children out of 185 now in the grammar school have been retarded, and are not going thru school as rapidly as they should?"

Another preventable waste, explained in another bulletin by the board of education, was the waste of money thru unnecessary absence from

school. The board estimated that \$222.33 last year was wasted on children who were enrolled but did not come to school regularly. This money loss resulted when the state figured up its appropriation based on the number of days attendance in each school district. Besides the money waste, the board emphasized the waste of children's time in falling behind in their grades and being able to cover less than the full school course before they have to leave school.

One serious wrong to Mendham children, which was pointed out, was the fact that there were 73 little boys and girls in the primary room where only 48 seats and desks are available. The conditions in this room with many foreign children unable to speak English and only one teacher, were such that the county superintendent warned Mendham that something must be done or the state would withdraw its school funds.

What the board has planned to do next year is to employ an additional primary teacher and to share with the township a supervising principal. The board signified its intention to install industrial work for boys and extend its domestic science courses.

To do all this an increase of \$1,072.72 only was necessary; state aid and private subscriptions make up the rest. The present assessment of property in the borough makes this increase only 10 per cent on every \$100 worth of property. The board of education's statement ended with the appeal: "Are you willing to pay your share toward giving the right school conditions to Mendham's children?"

The bulletins aroused great interest,—in fact the school was the absorbing topic of discussion during the entire two weeks. The daily visitors were entertained in the building by the teachers and the members of the board of education were besieged with questions. The election, may it be said, carried unanimously by the largest vote cast in many years.

Ventilation and Temperature.

A report on the ventilation of elementary schools has been presented to the school board of Boston, Mass., which shows the extent to which the instructions of the hygiene committee relative to open windows and room temperature have been observed by the grade teachers. The

report also contains recommendations for obtaining a record of temperatures in all school-rooms. They are as follows:

1. A monitor must be appointed in each elementary classroom, whose duties will be to record daily at four specified times, the room temperature, and whose duties will also include the care of the windows.

2. Monthly reports must be furnished to the director of hygiene, on forms suitable for the purpose, of the result of the work performed by classroom monitors.

3. Each high-school master must appoint one pupil in each room, whose duty will be the care of windows in the recitation rooms, study rooms, lunchrooms and home rooms, each period in the day.

4. Head-masters of high schools must furnish to the director of hygiene monthly reports on the work of the monitors.

It has been found advisable to order conferences of the director of school hygiene and the schoolhouse custodian on matters relating to the extremes of temperature, either high or low, for the purpose of determining whether the fault lies with the heating apparatus or with the method of controlling the system.

Trinidad, Colo. Supt. J. R. Morgan has been re-elected for his sixth term. During Mr. Morgan's incumbency, manual training in the schools has been particularly successful, domestic science courses have been established, a sub-freshman class has been inaugurated and a night school has been put into operation.

Stillwater, Minn. Supt. W. H. Hollands has been re-elected. Mr. Holland's salary remains at \$2,400.

Three Rivers, Mich. The board of education has re-elected Supt. J. A. Wiggers for his fourth term as head of the schools. In doing so the board of education increased the salary attached to the superintendency by \$200. Supt. Wiggers has made many changes in the Three Rivers schools during the administration, particularly in increasing the efficiency of the classroom methods, in overcoming crowded conditions and in bringing the schools above the average standard of the communities of the state.

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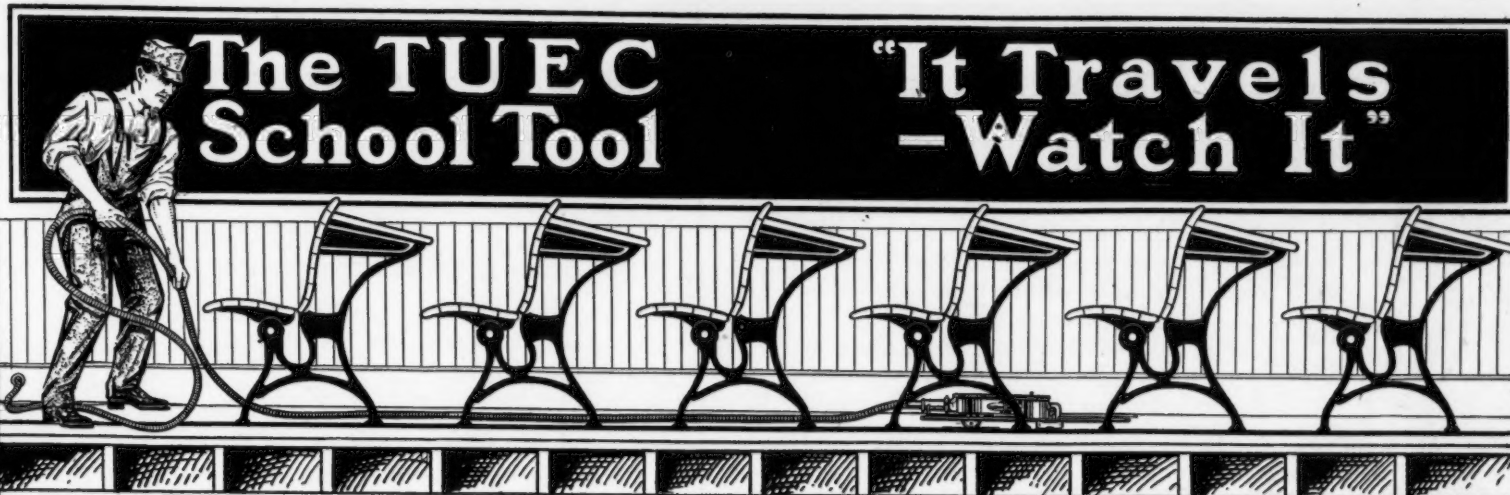


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Don't depend upon our judgment but follow the slogan "Ask the man who uses one." Ask the principal, the teacher, the janitor.

In a year's time the oil brush, the sweeping compound, the sawdust method, etc., have shown the effect of the blow received from the TUEC SCHOOL TOOL. The old methods of cleaning schools are fast passing into oblivion.

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is fast becoming recognized as the solution of all school sweeping problems. We have studied your problem from every angle and we can assist you positively and absolutely if you will only write us.

Write today for information on the Tuec Method of school sweeping.

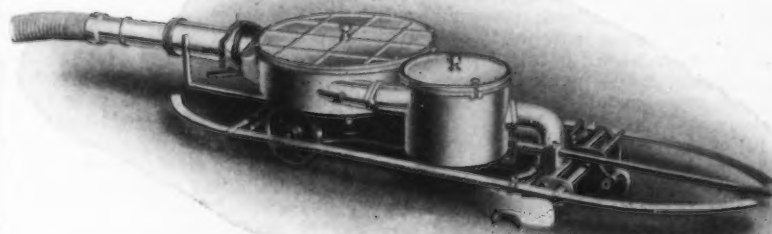


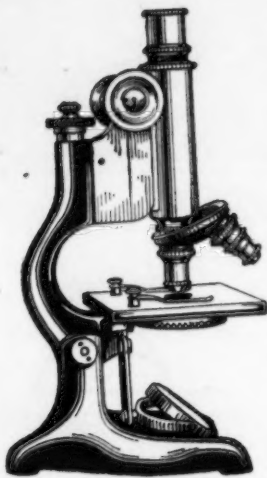
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Bausch and Lomb Microscopes

Model F-2 (illustrated) represents the highest development in microscopes of this grade and is specially adapted for all around use. Note the extra large space for object manipulation afforded by the long curved handle arm and by the large rubber covered stage.

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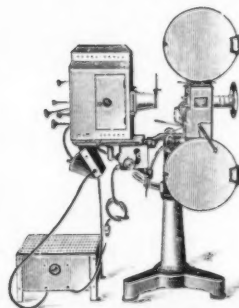
They are being adopted in all lines of instructive work. The wonderful photo play of "Creation" produced by the International Bible Student's Association, is of great educational value, and is a recognition of the instructive value of motion pictures.

Pictures must be projected without flicker; that is why this production uses in all its shows, only the

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Write for our special educational proposition O.



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NEW YORK

School Room Hygiene

SCHOOL-HYGIENE RULES.

Jackson, Mich. The department of hygiene has just been completely organized in the Jackson schools and operates under the following rules and regulations:

1. The supervisor of hygiene shall visit each school in his charge at least once each week at an hour to be determined by the superintendent of schools: Provided, that during an epidemic the inspection shall be as frequent as the situation demands.
2. He shall examine in the office of the school building or in a room set apart for this purpose, the following:
 - (a) All children isolated by the school nurse or the teacher as suspected cases of contagious diseases.
 - (b) Children who have been absent from school on account of sickness.
 - (c) Children returning after previous exclusion.
 - (d) Children sent to him by the nurse or teacher for diagnosis.
 - (e) Children previously ordered under treatment.
3. Children shall be excluded for the following diseases: scarlet fever, diphtheria, tonsillitis, measles, mumps, smallpox, chickenpox, whooping-cough, pneumonia, cerebro-spinal meningitis, typhoid fever, infantile paralysis, ringworm, impetigo, scabies, favus, pediculosis, and all other contagious diseases of the skin and scalp, and contagious eye diseases.
4. Whenever a child is excluded brief but sufficient reason therefor must be written on the exclusion card.
5. The principal of the building shall sign all exclusion cards.
6. In each instance where treatment of a child not suspected of contagious disease is deemed necessary, the supervisor shall notify the principal, who shall fill out and sign an official card

advising the parents to send the child to the family physician.

7. The supervisor of hygiene shall be guided by the sanitary rules adopted by the board of education and in force in the schools of this city.

8. Aseptic methods must be employed in all examinations. In making throat examinations wooden tongue depressors must be used to the exclusion of all others. Each depressor must be used once only.

9. In case a parent or guardian refuses to send to school a child between 7 and 16 years of age, claiming that such child is physically unable to attend, the supervisor of hygiene shall furnish the truant officer, upon his request, a written statement regarding the child's condition.

10. Medical supervision is restricted to diagnosis and advice to parents and guardians regarding the advisability of medical treatment. In no case shall the supervisor write a prescription or give medical treatment except in an emergency, and then without pay.

11. If a parent or guardian of a child objects to examinations by the school nurse or supervisor of hygiene and states such objection in writing to the teacher or principal of the building, the child shall be excused from such examination; except in the case of communicable or contagious diseases, when any child suspected of such diseases may be examined by the school nurse or supervisor of hygiene.

12. In addition to the duties outlined above, the supervisor of hygiene shall make investigations and report his findings regarding sanitary and hygienic conditions in the various school buildings and grounds, physical conditions resulting in the retardation of pupils in their studies, and any other matters that may properly come within the province of such a supervisor.

13. Dental inspection shall be made by the school nurse or the supervisor of hygiene, who shall advise parents to send their children, when

necessary, to the family dentist.

14. The school dentist will treat at the dental rooms of the district, free of cost, all children whose parents are unable to bear the expense of such treatment.

15. Children must have the written permission of the school nurse before claiming the privileges of the free dental clinic.

16. Adequate records shall be kept of the work of the supervisor of hygiene, the school nurse, and the school dentist, and monthly reports submitted thereon.

MEDICAL INSPECTION.

At a recent meeting of school and health authorities at Amesbury, Mass., favorable action was taken on the matter of a school nurse for the local schools. The appointment of the new official will depend upon the disposition of the finances at the annual meeting for this purpose.

The aldermen of Buffalo, N. Y., have voted in favor of the appointment of ten additional school nurses, at a salary of \$60 a month, and dental inspectors and assistants for the examination of the teeth of school children. Dental inspection will begin as soon as favorable action is taken by the councilmen and the mayor. Supt. Emerson believes that the school nurses will serve a very useful purpose if they follow up the work of the medical school examiners and go into the homes of those who need instruction in hygiene and sanitation.

Marquette, Mich. The school board has accepted a proposition by the local physicians who seek to co-operate with the city and school officials in providing a health officer for the city whose duties shall include the inspection of school children. The school board will pay annually to the health department about \$600 for the inspection of school children during a period of ten months. The health department in return for the same must furnish the services of an inspector as follows:

"The health officer shall respond to calls from teachers from any school buildings in the city, between the hours of 8:45 a. m. to 9:45 a. m. and 1:15 p. m. to 2:15 p. m., for the purpose of inspecting and advising in regard to any suspicious case of eruption or contagion that may come under the observation of the teacher.

MOTION PICTURES IN SCHOOLS

THE Public School System of Boston, Massachusetts, recognized as one of the most perfect in this country, has realized the educational value of visual instruction

AND IS USING

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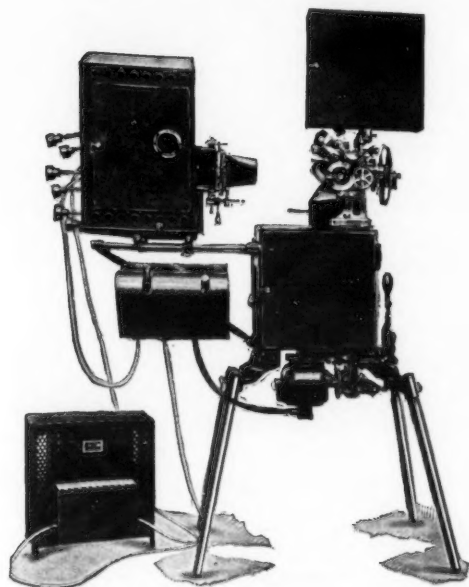
THE PERFECT PROJECTION MACHINE

Used by over 70 per cent of the trade

Write for Catalog A

NICHOLAS POWER COMPANY

NINETY GOLD ST., NEW YORK CITY



"He shall make a health survey or inspection of the pupils at the beginning of the fall and spring terms, to include an examination of eyesight, hearing and teeth and noting of any physical defect that an ocular examination may reveal to the trained eye.

"No child shall be subjected to an examination requiring the removal of any clothes or the use of such instruments of percision as the physician may use in regular physical examinations. Examinations shall be recorded upon cards furnished by the board of education and shall be filed in the office of the superintendent.

"Pupils in the grades or high school desiring to take part in physical contests, such as basketball, football and other forms of violent exercise, in the absence of a certificate from their family physician, shall submit themselves to a thoro physical examination by the health officer and shall present such certificate to the teacher of athletics.

"Parents or pupils who present no certificate may present a parent's statement to the effect that the school authorities shall not be held liable for damage or injury coming from school athletics or physical exercises to their children.

"It shall be the duty of the health officer to confer with the superintendent and chief janitor in matters relating to sanitation, hygiene, ventilation, heating and lighting of the school buildings of the city. He shall deliver to the teachers at least five lectures during the school year on matters pertaining to hygiene, sanitation and health matters relating to school work.

"Should he at any time observe that a pupil requires medical attention it shall be his duty to fill out a blank requesting the parents to submit the child for examination and treatment to their family physician. Upon the request of the parents of indigent children, it shall be his duty to advise and prescribe for the pupils."

Following the success of the open-window schoolrooms in the direction of better health and improved school work, Dr. C. H. Keene of the school hygiene department of the public schools of Minneapolis, Minn., has begun an agitation to extend the idea to all the school buildings. Dr. Keene, in his efforts, finds that the lack of the proper clothing for such a low temperature

stands in the way of the more general extension of the idea.

Brockton, Mass. The school board, in co-operation with the local dentists, has begun the inspection of the teeth of school children. The dentists work in pairs and at the conclusion of the work make known to parents the conditions detected.

Thru the initiative of Mayor Palmer, a member of the school board at Baker, Ore., pupils in the public schools have been examined for defects in eyesight.

Middletown, O. Thru the aid of the Social Service Bureau, arrangements have been made by the board of education to employ school nurses. The nurses have been at work for some weeks and have been found of great value in following cases of illness and physical defects uncovered by the medical inspectors.

The city council and the board of public education of Pittsburgh have come to an agreement in the matter of medical inspection expenses for the year 1914. It is planned to divide the expense between the two bodies, the board to pay \$27,000 and the city authorities \$34,000. The past year the school board paid two-thirds of the cost, but it is estimated this will be reduced by about \$6,000 during 1914 by reason of the fact that the school medical inspection covers more health phases than was originally intended should be charged to the board of education when the state school code was passed. The cost of school medical inspection during the next year including the salaries of five additional nurses, will amount to \$61,000.

The New Jersey state board of education has rendered a decision to the effect that teachers who are compelled by reason of deafness to wear an acosticon shall not be permitted to teach in the public schools. The case arose in Lumberton township, Burlington Co., where an instructor, Miss Ella Conrow, had been dismissed by the school board for inability to hear. She took up the case with the assistant commissioner of education upon the contention that the wearing of a device for relieving a defect in hearing was similar to the wearing of glasses for a defect in eyesight. The commissioner reversed the action of the Lumberton township board but this decision has been overruled by the state board of education.

Open-air Schools.

The school board of St. Louis, Mo., has adopted plans for an open-air school with provision for shower baths, dressing rooms, sleeping porches, dining-room and kitchen and six classrooms. The classrooms will be in a pavilion separate from the main building and the cost of the structure will be about \$35,000.

Boston, Mass. An open-air school for consumptive children has been established in the Norcross school-yard, making the second innovation of this character in the city.

The first open-air school in San Francisco, Cal., has been opened at the State Normal School with 100 children in attendance. Four school-rooms open directly on the Pacific Ocean and it is planned in the future to change all the classrooms of the building into outdoor rooms. The building has been so arranged that the children can step directly from a low platform into the playgrounds adjoining.

Battle Creek, Mich. The school board and the local anti-tuberculosis association have made arrangements for the opening of a school for anaemic and sickly children. Open-air clothing will be provided by local clubs and associations at an estimated expense of \$1.50 per child.

Fond du Lac, Wis. Thru the initiative of the local women's club, arrangements have been made for the opening of an open-air school. The city will furnish the building and the equipment; teacher and janitor will be provided by other individuals or organizations.

Dental Hygiene.

Kansas City, Kans. A free dental clinic has been opened for the benefit of pupils who are unable to pay for dental service. The work has been placed in charge of the Wyandotte County Dental Society.

Flint, Mich. The local dentists have offered to fill, free of charge, the teeth of school children who are unable to pay for such service. It is planned to establish a dental clinic in some central location.

Elgin, Ill. A report of the school nurse on the condition of school children's teeth states that one in every three is in need of dental service. In the majority of cases the parents promptly comply with the suggestions of the nurse.



Devoe School Water Color Box No. 118

Devoe, in making School Water Colors for inexpensive boxes and otherwise, take the necessary painstaking care to insure absolute uniformity of true colors. By their use, the teacher's best work is made possible. Devoe colors are an active help—some makes of colors may be a hindrance.



Devoe School Water Color Box No. 122

Teachers will find in the Devoe stock the largest and most complete assortment of Drawing Supplies, Modeling Material, Stenciling Supplies and everything else for School Art Work—Fully described in our new Catalog. Write Dept. 5 for it.

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Chicago

Fulton and William Streets
New York

1312-1314 Grand Avenue
Kansas City

School Administration

RATING TEACHERS.

Wichita, Kan. The school board has in use the following rating blank for determining the efficiency of teachers:

TEACHERS' EFFICIENCY RATING FILE.

MAY, 191

(For Use of Superintendent and Board of Education Only.)

Name of Teacher.....

Name of School.....

Number of Pupils.....

Name of Principal.....

Apparent Age.....Grade or Subject.....

Years Under Direct Observation.....

Years' Experience.....

The following plan of grading is suggested: E., excellent;

G., good; F., fair; P., poor; V. P., very poor.

I. PHYSICAL EFFICIENCY

1. General Impression

2. Health (general)

3. Voice (described as strong, weak, pleasing, falsetto, irritating, imitating, etc.)

4. Personal habits

5. Energy

6. Endurance

II. MORAL-NATIVE EFFICIENCY

1. Self control

2. Optimism

3. Enthusiasm

4. Sympathy

5. Tact

6. Industry

7. Earnestness

8. Adaptability

9. Sense of humor

10. Discernment of motive

11. Judicial mindedness

III. ADMINISTRATIVE EFFICIENCY

1. Initiative

2. Promptness

3. Accuracy

a. In school detail

b. In reporting incidents

4. Economy

a. Time

b. Property

5. Co-operation (with associates and superiors)

IV. DYNAMIC EFFICIENCY

1. Preparation

a. Intellectual capacity

b. Academic or foundational education

c. Professional training

2. Professional attitude and interest

3. Appreciation of intellectual, social and moral values

4. Instructional skill

a. Attention and interest of pupils

b. Vitality of instruction (freedom)

- c. Organization and presentation of subject
- d. Eliciting pupil's contribution and participation
- e. Effective use of materials and apparatus
- f. Assignment of work
- g. Government—Discipline

V. ACHIEVED EFFICIENCY

1. Respect of pupils and community

2. Leadership: Stimulation of individuals and community

3. School achievement

a. Visible results (advancement and attainment)

VI. SOCIAL EFFICIENCY

1. Intra-mural interests

2. Extra-mural interests

a. Cultural

b. Civic

c. Athletic

d. Philanthropic

e. Religious

Special accomplishments such as music, art, etc.

REMARKS.....

THE SCHOOL REPORT.

Superintendent S. R. Shear of Poughkeepsie, N. Y., gives in his annual school report the guiding principles of school reports and report making. These principles have enabled him to write for years readable, usable and interesting annuals which have permanent as well as immediate value. He suggests six positive and five negative principles:

1. To make a permanent record for future reference.

2. To furnish concise information for the board of education.

3. To inform the public concerning (a) receipts, (b) expenditures, (c) work accomplished, (d) plans contemplated, (e) educational policy.

4. To serve as an annual address to teachers and employees.

5. To serve as a hand book for the information of other cities.

6. To enable the board of education to "take stock."

He urges that negatively school authorities should not make their reports:

1. A compilation of dry statistics.

2. An inventory of school property.

3. A catalog of names which can have no permanent value or interest.

4. A record of commencement programs.

5. The medium of preserving addresses which are of local and temporary value only. Of course these matters should be made a permanent record in the central office, but the publication is entirely unnecessary.

School Administration Notes.

The Buffalo Public School League, lately organized, has suggested a new form of school government for that city, a system being favored in which general control of schools shall be placed in the hands of an unpaid school board. This board would determine the choice of sites for new schools, decide on building plans, the appointment of a school superintendent and the appointment of teachers. The sole qualification to the powers of the board would be that teachers, assistants and school supervisors are to be appointed by the board upon nomination of the superintendent. The league membership is largely made up of leading advocates of a new commission form of government for Buffalo, a bill for which has passed the legislature.

Under the direction of the committees on supplies and teachers, the school board of Elgin, Ill., will undertake a complete inventory of all school property in the Spring. Included in the investigation will be examinations of the school buildings, heating plants, desks and equipment.

As a means of placing high-school graduates at actual work immediately following the completion of the course, the school board of St. Louis, Mo., has addressed the various merchantile establishments, factories and offices in regard to available positions for the students.

As a beginning, letters were addressed to five hundred business houses in the city. Each letter was accompanied by a blank card for use in naming the date when a position will be vacant in the office of the firm. All cards returned to the superintendent's office will be given special attention and the pupil who is selected as the nearest to the requirements named will be given an opportunity to interview the prospective employer. It is estimated that three hundred pupils will be in position to accept suitable work in the business line.

The school board of Gloucester City, N. J., has reorganized with a membership of five. Since 1868 there have been six persons on the board with the result that a number of deadlocks occurred which interfered with the proper transaction of the schools' business affairs. Appointments are made by the mayor of the city.

BRADLEY'S STANDARD WATER COLORS

Have been adopted by more schools than all other kinds combined. Wherever the best in art work is attempted and accomplished Bradley Colors are used. Manufactured expressly for educational purposes they meet perfectly every requirement of that exacting field.

The Bradley Art Catalogue illustrates and describes art materials for every need. Free for the asking—please ask.



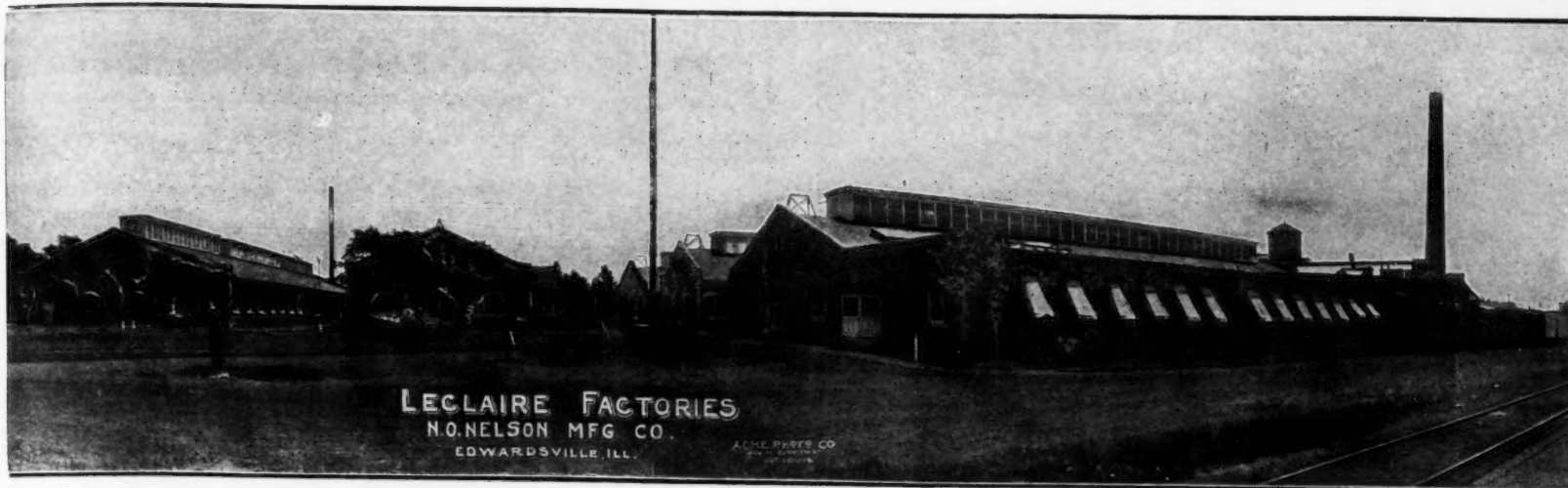
Bradley "B-1" Box—eight pans semi-moist colors; No. 7 brush. The biggest selling box on the market.

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Nelson Plumbing Goods have reached that point of efficiency where school people in all parts of the country know Nelson means Quality.

Take in the matter of the Nelson Double Stall Closet Combination with Utility Chambers. Every architect and school builder knows the ideal character of toilet rooms equipped in this manner. And yet its the word "NELSON" that guarantees you the service and the quality.

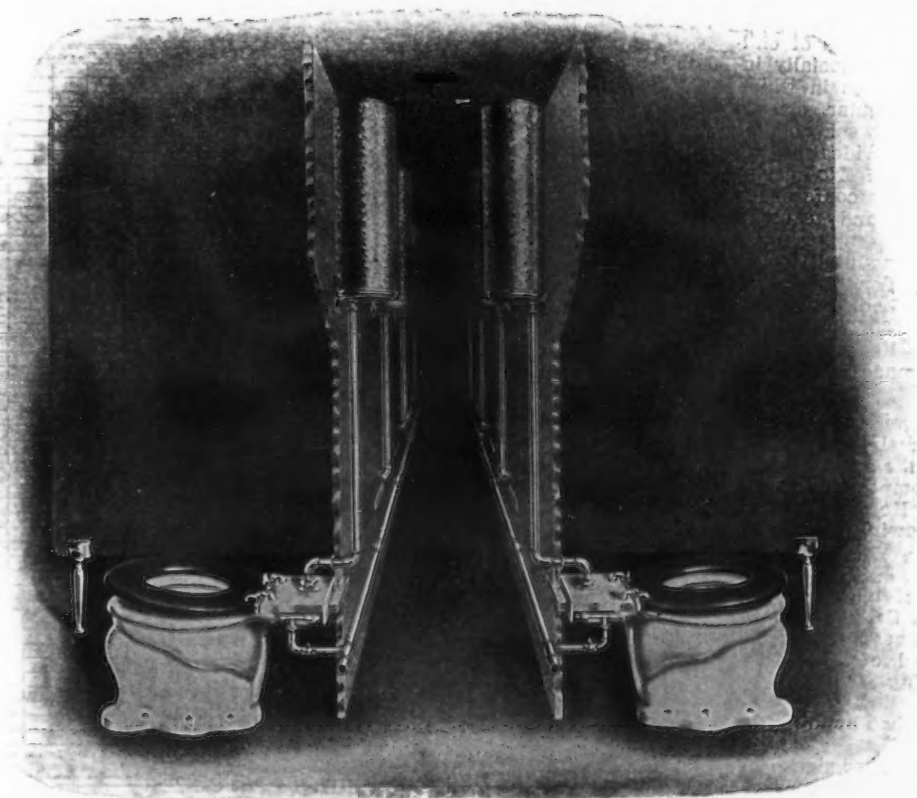
And so it is that every piece of plumbing used in a school building ought to be labelled "NELSON." We guarantee everything we put out. Our Leclaire Factories at Edwardsville, Ill., are equipped to do only quality work.

Why not let us send you our school plumbing catalog. Every architect and school board official should have a copy.

N. O. NELSON MFG. CO.

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Houston, Texas

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Dustless Enamelled Plain White **Colonial Chalk & Wax Crayons** Semi-Dustless Wax Drawing

Colonial goods are made by an exclusive process that ensures uniform quality and color, and smooth, clear marks. They protect the eyesight by being easy to read at a distance; they protect the health by being free from injurious substance.

Write today and let us save you money.

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Dept. 25 AKRON, OHIO



Munsell Color System

tests and balances color by measurement. The middle colors with gray, black and the maxima of red, yellow and blue, on which the Munsell Color System is based, should be used in the form of crayons, water colors, atlas of charts, color tree, sphere, etc.—the only way to obtain an accurate knowledge of color harmony. The Munsell Color System is used in leading art schools, universities, colleges and in the public schools of New York and other cities.

Explanatory circular "M" and price list free for the asking.



Send 10c in your letter for No. 2 box of Crayons' postage paid.

Wadsworth, Howland & Co., Inc.
Sole Manufacturers of Material for the Munsell Color System
BOSTON, MASS.

Out of the Days Work

Go-To-School Week.

Supt. H. A. Bone of Batavia, Ill., arranged during the week of February 8-14, a "go-to-school" week, during which the parents of children enrolled in the schools were especially invited to visit the respective buildings in which their children are enrolled. Regular classes were conducted during the entire week so that the parents might obtain a clear idea of the actual work going on in the schools. No special programs were arranged but private conferences were held between the parents and teachers wherever possible.

The total number of visitors amounted to 821 or 33 for each teacher in the grades. Including the kindergartens and the high schools, the number of visits, per teacher, were 28.3. The results were so satisfactory that it is likely that the "go-to-school" week will be made a regular feature annually.

Insuring Prompt Invoices.

To prevent firms and individuals who supply books, furniture and supplies to the Salina, Kans., schools from delaying the prompt and proper sending of invoices, Mr. L. C. Housel, clerk of the board, has devised the following suggestive form:

Important.

To insure prompt payment of bills due you from The Board of Education, Salina, Kansas, please observe the following requests:

Mail invoice to Clerk, Board of Education, Salina, Kansas, promptly showing

1. Who made the order;
2. To whom shipped, or to what building delivered;
3. Accompany invoice with voucher signed by some person and properly acknowledged, as required by law.

Laws 1891, ch. 249, sec. 2. No warrants * * *

shall be issued or authorized by any * * * board of education, except on audited account duly itemized in writing and verified by affidavit, setting forth that the same is just and correct and remains due and unpaid * * *

Bills are allowed at the regular monthly meeting, the first Monday evening of each month. Warrants in payment are mailed out or delivered on the Wednesday following.

Bills must be in the hands of the Clerk not later than Saturday preceding the first Monday of the month. This is particularly necessary when the first Monday comes on the first, second or third day of the month.

All bills allowing a cash discount will be paid as soon as they have been verified by the person making the order. The Board of Education.

L. C. Housel, Clerk, Salina, Kansas.

CORRY, PENN'A. PUBLIC SCHOOLS Teacher's Monthly Statistical Report to Board of Education ENROLLMENT, ATTENDANCE, Etc.

Year 19...	Month...	Enrollment			Attendance			Tuition			Selling			Other		
		Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
1. Reported attendance current Mo. (a)																
2. Reported attendance previous Mo. (b)																
3. Admitted, new pupils, this Mo. (c)																
4. Re-admitted this Mo. (d)																
5. Highest enrollment this Mo. (e)																
6. Transferred this month (f)																
7. Moved from city this Mo. (g)																
8. Dropped out this Mo. (h) (reason below)																
9. Expelled at end of Mo. (i)																
10. Total days attendance this Mo. (j)																
11. Number days absence this Mo. (k)																
12. No days beyond this Mo. (l)																
13. Per cent. of attendance for Mo. (m)																
14. Average daily Attendance this Mo. (n)																
15. Cases tardiness this Mo. (o)																
16. No pupils promoted this Mo. (p)																
17. No pupils demoted this Mo. (q)																
18. No cases Corp. Pun. (r)																
19. No tuition pupils (s)																
20. Total enrollment in City (t)																
21. Transfers from to date (u)																
22. Enrollment to date, less transfers (v)																
23. Expelled out to date (w) (x)																
24. Re-admitted to date (y) (z)																
25. No pupils lost to date (aa)																
26. No seats in room (ab)																
27. Days taught for month (ac)																
28. Days teacher absent (ad)																
29. Times teacher tardy (ae)																
30. No. pupils to parents (af)																
31. No. pupils to parents (ag)																
32. Visits by Superintendent (ah)																
33. Visits by Board of Ed. (Names) (ai)																
34. No other visitors (aj)																

NOTES: (a) See item 8 of previous month. (b) "Transfer" are changes wholly within Corry district. (c) Different pupils from 2 or 3. (d) Estimated a previous month but not the past month. (e) Different pupils from 6 or 7. (f) May increase but not decrease. (g) Enter 0 or 100.

ITEM 8 EXPLANATION—Names of Pupils Dropping Out, last date in attendance and Pupil's Reason for Dropping Out

No.	Name	Pupil's Reason	Date	No.	Name	Pupil's Reason	Date

I certify the correctness of each of the above items and acknowledge receipt of my salary for each month reported.

Teacher

Report form used in public schools of Corry, Pa. Combines complete statistics for full Semester with receipts for teachers' salaries.



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Imitated from coast to coast but never equalled

NOT THE
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THE BEST



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FREE UPON
REQUEST

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The American Crayon Co.

SANDUSKY, OHIO AND WALTHAM, MASS.

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SPECIAL STUDIES.

Following the suggestion of Dr. Furstman, the school board of La Crosse Wis., has permitted the opening of "little mothers' classes" for the girls of the higher grades. The classes will be conducted in the school buildings and after school hours. Attendance is voluntary on the part of the girls.

In connection with a city and state agitation for better fire protection, the public schools of Cleveland, O., in co-operation with the state fire marshal's department, will undertake a special study of this subject. Public meetings for principals have been arranged and steps taken to transmit to the teachers the essential facts in the fire marshal's message. The teachers, in turn, are urged to impart to the pupils information which has been gained thru the public meetings and the printed tracts of the state marshal's office.

Steps have been taken to introduce into the schools and social centers of Detroit, Mich., motion pictures of an educational and entertaining character. Supt. Chas. E. Chadsey is taking an active part in the proposed innovation.

Ashland, Pa. The school board has provided for the establishment of an ungraded school for the benefit of children who are deficient in any study. It has been found that a number of children are each year failing of promotion because they are unable to do the work of their grades.

Under the direction of City Supt. J. C. Collicott of Indianapolis, Ind., and Supt. Lee F. Swails of the Marion county schools, special instruction on the subject of tuberculosis has been undertaken for the benefit of school children. Members of the Marion County Anti-Tuberculosis Association have been delegated to visit the schools and an exhibit has been prepared for exhibition purposes in vacant stores thruout the county.

Detroit, Mich. Special rooms for sub-normal children have been opened in two additional schools, making six of this character opened during the present year. The total number in operation has reached eighteen.

Supt. Charles E. Chadsey of Detroit, Mich., in co-operation with the local postmaster, has undertaken the instruction of school children in the subject of penny savings. A special department

has been established at the postoffice for the benefit of teachers and postal savings cards are provided for children in every section of the city who desire to make deposits.

The school board of St. Paul, Minn., has assumed the direction of a class of deaf children at the McKinley School and has since the beginning of the last semester paid the salary of the instructor. The school was begun by the parents of the children.

The study of German has been undertaken in the grade schools of Portland, Ore., with an enrollment of 200 students in one school alone. Three additional schools have classes and prospects are that the idea will be extended to the remaining schools of the city.

Acting upon the recommendation of Supt. Charles E. Chadsey, the school board of Detroit, Mich., has included in its annual budget the sum of \$5,000 for the purchase of typewriters. A number of machines will be used in the grammar grades for the purpose of acquainting the pupils with the use of the machines. The further sum of \$1,850 was added for the purchase of five adding machines, one for the business department of each high school.

Roslyn, Wash. Since January, 1914, the schools have been giving credit for the performance of home duties. A home credit system has been adopted and the duties selected have been compiled for use by the pupils.

A study of the chief industries of the Middle-west, including the products of the local industrial plants, has been undertaken by the Sixth B Grade at Omaha, Neb. The pupils are permitted to write to the heads of the various concerns for information regarding the specific industry represented by the persons addressed. A recent study of the class was the lumber industry in the South. A letter of one of the pupils brought several pages of valuable data for the class.

The instructor in charge of the grade is satisfied that the efforts of the pupils in letterwriting have resulted in a well-formed style in writing as well as a fund of information which cannot fail to broaden their views in industrial activities.

Domestic science and sewing are being taught to classes of fifty-five girls in School 58, Buffalo, and the motto of the pupils is: "A girl's real

character shows very clearly by the way in which she spends her spare time." One-third of the girls' time is spent at sewing, one-third at domestic science and one-third at the English course. In sewing, the children work out their own problems as to amount of material required and the cost of the article when completed. Selecting materials, combining colors and utilizing waste pieces play an important part in the work.

A training school for dental nurses has been put into operation at the Fones School, Bridgeport, Conn., with an initial attendance of 32 young women including teachers, dental assistants and others. The training school is the first of its kind in the United States and gives the students the benefits of special instruction under university professors and practical dentists. The class will hold its first graduation in June of the present year following which the students will be available for prospective dental-hygiene positions.

The school board of Clinton, Mass., has abolished the annual senior class trip to Washington and has recommended that the students wear caps and gowns at the graduation exercises. The changes have been made with a view to economy in commencement expenses.

The school board of Davenport, Neb., has ruled that high-school seniors must wear caps and gowns at the graduation exercises.

Physical Education News.

Anaconda, Mont. The school board has made arrangements for the employment of a physical director for the public schools.

Acting upon the recommendation of Supt. B. M. Watson, the school board of Spokane, Wash., has undertaken the reorganization of the system of school athletics with a view of providing physical exercise for the entire student body and the elimination of all specializing on the part of a small number of the students. Out-of-town football games and other athletic interscholastic games are prohibited and contests are limited to the local schools. The change becomes effective April first.

Oswego, N. Y. Two physicians have been appointed as examiners of the children in the public schools. The salary has been fixed at \$400 per year.

"FROZEN STIFF" is the



usual condition of drinking fountains in Winter.

Remember—

THE MURDOCK BUBBLE-FONT

is the only fountain on the market that will not freeze.

Every Doctor will tell you "The place for School Drinking Fountains is in the yard."

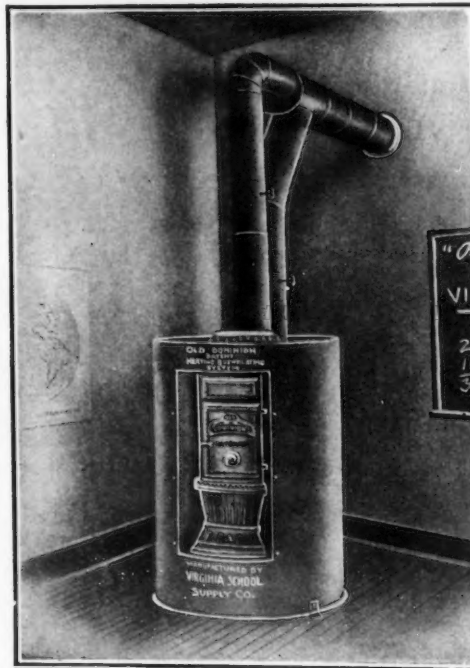
Supply your school yard with a Fountain that works twelve (12) months in the year and not only May and June—September and October.

WRITE TODAY FOR BOOKLET

THE MURDOCK MFG. & SUPPLY CO.

CINCINNATI, OHIO

Old Dominion Patent Heating and Ventilating System



Minimum Cost—
Maximum Results

"The Spirit of Progress"

is exemplified in the Nation Wide Movement for better and more sanitary heating and ventilating of our schools, particularly in rural districts. The OLD DOMINION PATENT HEATING AND VENTILATING SYSTEM IS DAILY GROWING IN DEMAND in every State in the Union. Why?

It does not re-heat and circulate the foul air in the room.

It warms the room with pure fresh air and combines a duct or pipe to exhaust the vitiated or foul air. No other system does this.

It does not require a separate independent foul air flue of brick or metal as all other systems do.

It is simple, easy to set up, and easy to regulate. All other systems are complicated.

It does not clog with soot and rot out, requiring expensive experts to repair; other systems do.

It draws the foul or vitiated air from the floor of room by a syphon suction combined with the heater; no other system can do or does do this.

It is the cheapest of all heating and ventilating systems, because it combines heater, ventilating drum, ventilating mat, stove pipe and foul air pipe or duct. Pipe furnished free five feet from center of heater. All other systems require expensive independent foul air flues or ducts, either metal, brick or stone.

SEND FOR DESCRIPTIVE CATALOG

VIRGINIA SCHOOL SUPPLY COMPANY

No. 18 South Ninth Street, Richmond, Virginia

SCHOOL HEATING AND VENTILATING PROBLEMS.

(Concluded from Page 17)

Some of the arguments against recirculation are:

The cost and space occupied by the necessary return ducts.

The additional power required to pump the air back to the fans rather than letting it escape.

The air washing or purifying apparatus may by inefficient operation permit very much worse conditions to obtain than will be possible using fresh air.

It has not been proven beyond doubt that no physical harm comes to the occupants from recirculation, since such plants have not been in operation as yet for a sufficient period.

It seems to me that the recirculation idea is far short of being worthy, since, like our forefathers' stove systems, it depends for fresh air on leakage, and leakage must stop, and will stop as people appreciate what it means in fuel cost.

It has been demonstrated that the clear water flowing from highly efficient and well maintained and operated sewage disposal systems is drinkable and will sustain life, but one prefers to wait until the sun and air and general natural processes have had an opportunity to affect it. If it had been demonstrated that the same old air could be washed and ironed and manicured until fit for use again one would still prefer to wait for sun and water and general natural processes to affect it.

Newer Studies of Ventilation.

An authoritative ventilation commission has been organized in New York. One has been operating in Chicago for several years, studying and experimenting to improve our methods of ventilation. The members of these commissions realize that conclusions may be based only upon

repeated tests, physiological and psychological, continuing for considerable periods, with many individuals and appliances, with different groups to check by—at a heavy expenditure of time and money.

The subject is being approached by the younger generation from both the practical and theoretical sides, by sanitarians, physicians and engineers, and great improvement in our general practice may be predicted. It is very easy to find fault with what we have. It is not so easy to formulate a perfect solution of all our faults.

The results from existing ordinary ventilating plants in school buildings may be very much improved:

(1) By double windows, prevention of leakage thru cracks, thin walls, etc.

(2) By the introduction of artificial moisture, preferably with automatically controlled humidifying air washers but possibly with steam jets automatically controlled and intelligently operated.

(3) By periodic flushing out of the rooms, preferably all of the rooms in a building at one time, by opening all windows for a few minutes while the occupants exercise vigorously.

The results from new ventilating plants in school buildings may be improved by carrying out all of the above suggestions, and in addition by providing:

(4) Cold walls, ceiling, etc., insulated and protected as is common in cold storage warehouse construction.

(5) The use of no direct radiators which can affect by radiant heat those who must sit near.

(6) No heating surface directly against an outside wall as this is most uneconomical, due to the high rate of heat loss (a hot surface close to a cold one).

(7) A plant in which it is impossible to occupy the building for school purposes without ventilating when it is necessary to heat it, (ordinarily when no heat is required open windows give far the best ventilation).

(8) Efficient provision for stopping the ventilation and the fuel loss due to the same as soon as the occupancy of the building ceases.

I know of no school building in which all of these conditions are in effect. A residence in Wilmette, Illinois, the construction of which I influenced, which has refrigerator insulation, is heated efficiently on approximately 50 per cent of the coal its neighbor without such insulation requires.

A school in Rock Island, Ill., with air-tight steel sash surprised me at the ease with which it was kept warm in the very coldest weather.

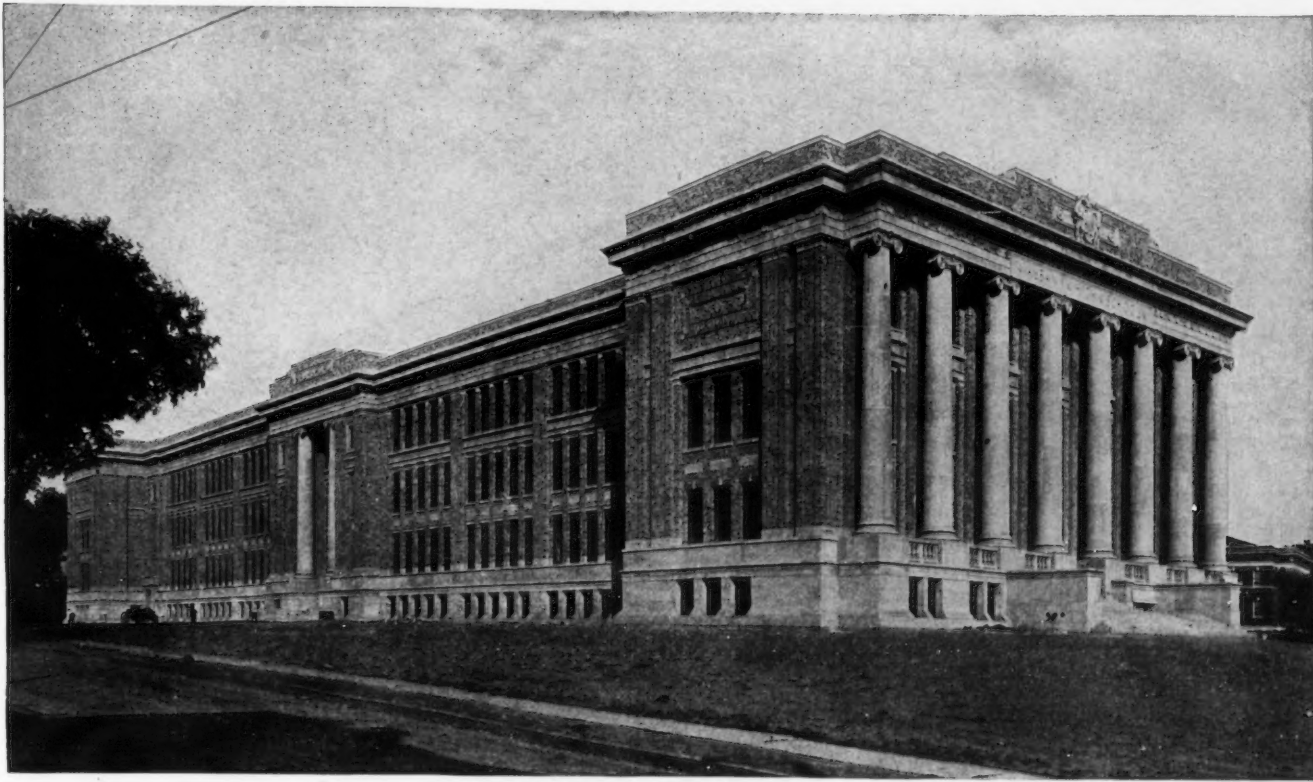
Two large schools, one in Boston, one in Toledo, in one end of each of which the air for over two months was artificially moistened showed a better percentage of attendance in the moist ends than in the dry ends. There are no other similar tests that I know of, so that the information is all favorable.

I believe that it is impossible too strongly to urge the necessity for better insulation of our walls and window construction which will insure less leakage. Ice-house insulation is practicable, can be made fireproof, will not cost more than will be paid back by the fuel saving, and will permit of so-called displacement ventilation.

Displacement ventilation is the system our lungs use; it is economical and easily controlled. It is free for everyone to adopt, adapts itself perfectly to proper conditioning and appeals sentimentally, since each person will get his own air supply unpolluted by part of the exhalation and contact of his neighbor. It most nearly approximates outside conditions on a breezy day.

The Modern School Makes Clow's The Rule

ALBANY'S MAGNIFICENT HIGH SCHOOL EQUIPPED THROUGHOUT WITH CLOW PLUMBING FIXTURES EXCLUSIVELY. ONE OF THE FINEST INSTALLATIONS IN AMERICA.



Architects, STARRETT & VANVLECK CO.
New York City

ALBANY HIGH SCHOOL, ALBANY, N. Y.
Engineer, E. E. ASHLEY, JR.
New York City

Plumbing by A. J. ECKERT CO.
Albany, N. Y.

IN THIS SCHOOL ARE INSTALLED Clow Madden Patent Automatic Closets, Solid Porcelain Urinals with white glass partitions, Adamantose Bubble drinking fountains, Adamantose lavatories and shower baths. Clow's Benedict nickel fittings are used throughout.



R-735
Clow Hygiene Bubble
Fountain
(Madden's Patent)

Clow Bubble Cups are Law Proof and Germ Proof

All Bubble Cups are law proof but very few are germ proof.

The law now compels their use. How soon will it prohibit their abuse? The large majority of Bubble Cups now on the market are as insanitary as the drinking cups they have displaced, and mechanically they are equally defective. In selecting Bubble Cups use your intelligence and when the statutes recognize the evils of the present improper types you will not be required to change your equipment.



R-703
Clow Wall Fountain
(Madden's Patent)



BOYS' TOILET ROOM ALBANY HIGH SCHOOL
Showing Clow Adamantose Lavatories and Solid Porcelain Urinals



BOYS' TOILET ROOM ALBANY HIGH SCHOOL
Showing Water Closet Stalls and Lavatories

Send for Catalog of School Plumbing Fixtures.

JAMES B. CLOW & SONS, Harrison Street Bridge, CHICAGO

HAVE YOU EVER NOTICED



in visiting a school how a pedestal fountain, such as we show here, adds to the beauty of the school corridor?

Combine this beauty with the utility of a pedestal fountain and you have a combination that is really worth while.

Ask us, therefore, today for our 1914 catalog.

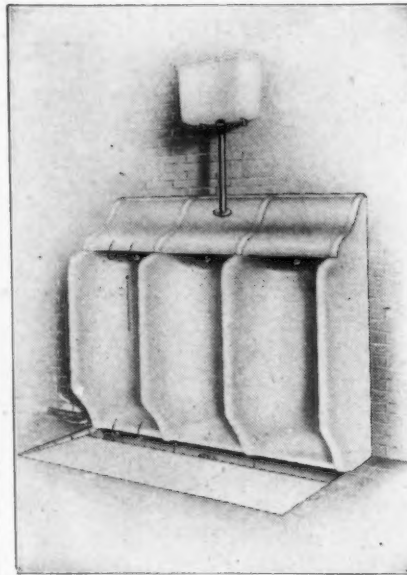
Rundle-Spence Mfg. Co.

MILWAUKEE,

WISCONSIN

The "EBINGER" Ventilated Urinal

Insures Sanitation



Every odor from this urinal is carried off—out of the building. No disinfectant needed. The atmosphere in the toilet room is as wholesome as that in any school room, and is kept that way by proper ventilation.

Our literature is free—write us.

NO MORE FOUL TOILET ROOMS

if the "Ebinger" Ventilated Urinals and Closets are used. Don't delay securing a sanitary installation. We also manufacture a complete line of Sanitary Drinking Fountains.

THE D. A. EBINGER SANITARY MFG. CO.

COLUMBUS, OHIO

HIGH-SCHOOL ADMINISTRATION.

Chicago, Ill. The school board has entered into an agreement with the Western Electric Company, by which students in the stenographic course of the Austin high school are employed on a co-operative basis. The company has opened six regular stenographic positions to be filled by twelve students alternating weekly. Wages of \$5 per week are paid and special attention is given to initiate the students into the routine of the firm's office.

Under the direction of Principal C. W. Gayman of the Central High School, Toledo, O., one hour per week has been devoted to a series of talks to the students by representative businessmen of the city. The talks include advice along the lines of salesmanship, store departments, technical service and other lines of business of value to the boy after the completion of the school course.

Mr. Gayman, in discussing the inauguration of the plan, said in part: "If the school and the business interests of the city can enter into some effective plan of co-operation by which a boy can begin to learn a trade, a business or a profession, either with or without the apprenticeship idea, and at the same time finish his high school course, we shall not only hold in the school a much greater number than ever before, but shall be able to turn out a distinctly better product each year."

A resolution presented by Supt. I. O. Winslow of Providence, was adopted by the Barnard Club of Rhode Island which endorsed the plan for the extension of the school day in all high schools. The change is to be made in those cases where it is found practicable.

The resolutions adopted by the club contained the approval of the following provisions: "1. That teachers in high schools should devote a greater amount of time to teaching and supervised study and less time to the hearing of recitations than is generally customary.

"2. That wherever it is practicable, the school day in high schools should be extended sufficiently to render it possible for students of average ability to do at least the greater part of their studying in the school buildings under the supervision of their instructors.

"3. That the importance of the teaching of English should be more fully recognized and that for most students the customary methods of treating certain historical literary productions with prolonged study and criticism should be abandoned in favor of courses of greater natural interest and value.

"4. That, as far as practicable, there should be such differentiation and flexibility in courses of study as to enable students to devote themselves to work that is best suited to their needs.

"5. That there should be open to all students in any course the possibility of including in their work the elementary study of natural science and of civics and economics.

"6. That vocational high schools should be established in the State."

The Public Library of Des Moines, Ia., in co-operation with Supt. Z. C. Thornburg and the principals, has opened branch libraries in three high schools. The libraries will be related to social-center work and will include between 400 and 500 reference and fiction books. The rooms will be open to the public on Friday afternoons and evenings. It is the belief of the library officials that students will interest their parents in the library by taking out books for home use and will thus make the high-school stations recruiting places for reaching a large number who could not otherwise be touched.

ADOPTS STATE-WIDE RULES.

The Wisconsin State Board of Health has recently promulgated a series of rules concerning the exclusion of children from public and private schools because of contagious disease. The rules, in substance, provide:

1. No person suffering from Asiatic cholera, yellow fever, smallpox, typhus fever, bubonic plague, diphtheria, scarlet fever, measles, whooping-cough, cerebro-spinal meningitis, or acute anterior poliomyelitis shall be admitted into any public, parochial or private school, college or Sunday-school. The attendance of children at school who have chicken-pox or mumps is also prohibited.

2. No person shall be admitted to any public, parochial or private school or college, or Sunday-

school, from any family in which the diseases enumerated exist.

3. No parent, guardian or other person having charge or control of any child shall allow or permit such child to go to school from any family in which a case of the diseases mentioned has recently occurred, without a permit from the board of health or its proper officer.

LANCASTER, OHIO, SALARY SCHEDULE FOR ELEMENTARY SCHOOLS.

Upon the recommendation of Supt. S. H. Layton, the school board of Lancaster, O., has adopted a salary schedule for the elementary schools, the classification of which is based on the Elliott scheme for measuring the efficiency of teaching. The maximum number of points for individual efficiency is 800.

Year of service	Class A	Class B	Class C
	750-800 Points	700-750 Points	650-700 Points
First year	\$475	\$450	\$425
Second year	500	475	450
Third year	525	500	475
Fourth year	550	525	500
Fifth year	575	550	525
Sixth year	600	575	550
Seventh year	625	600	...
Eighth year	650	625	...
Ninth year	675
Tenth year	700

The first two years' experience elsewhere do not count on salary, except for State Normal or College graduates; after that, two years elsewhere count as one.

No teacher by promotion from one class to another will receive more than \$50 per year increase in salary.

Teachers without experience, but with Normal or College graduation, will be classed as "A." Others as "B," until such time as a reclassification of the teaching corps can be made. The classification is the work of the Superintendent and Principal in their combined judgment.

Astoria, Ore. Supt. John G. Imel has been re-elected at a salary of \$2,100 per year.

Supt. M. E. Crosier of Norfolk, Neb., has been re-elected at a salary of \$2,000.

Your School Building is no better than its Plumbing

Wolff Seat-operating School Closets

Wolff Closets are made of

Vitreous China

a non-absorbent, unstainable ware which will positively not craze.

Wolff Seats are of

Extra Heavy Oak

with Galvanized Cast Iron Re-enforcing Ring, which prevents warping, cracking and opening at the joints.



Florence High School, Florence, Neb., J. J. Davey, Archt.

Equipped entirely with products from the

L. WOLFF MANUFACTURING CO.

Fifty-nine Years of Quality

MANUFACTURERS OF

Plumbing Goods Exclusively

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601-627 West Lake Street

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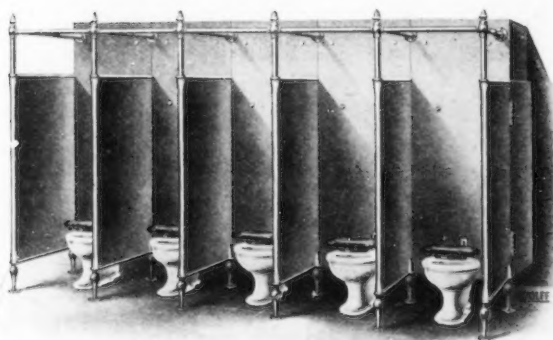
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SAN FRANCISCO, CAL., Monadnock Bldg.
WASHINGTON, D. C., 1130 Woodward Bldg.



Send for School Closet Circular

COMING CONVENTIONS.

- Apr. 1-4—Physical Education Association at St. Louis, Mo. Helen McKinstry, Secy., Brooklyn, L. I., N. Y.
- Apr. 1-2-3—Michigan Schoolmasters' Club at Ann Arbor. Joseph M. Frost, Pres., Muskegon.
- Apr. 2-3-4—Southeastern Iowa Teachers' Association at Burlington. Supr. H. E. Blackmar, Pres., Ottumwa.
- Apr. 2-3-4—Northwest Iowa Teachers' Association at Sioux City. L. H. Minkel, Secy., Fort Dodge.
- Apr. 2-3-4—Northern South Dakota Educational Association at Aberdeen. A. C. Bolstad, Secy., Groton.
- Apr. 2-3-4—Northeastern Iowa Teachers' Association at Cedar Rapids. Chas. F. Pye, Pres., Waukon.
- Apr. 2-3-4—Northern Indiana State Teachers' Association at Indianapolis. J. G. Collicott, Supt. of Schools, Indianapolis.
- Apr. 2-3-4—Southern Illinois Teachers' Association at Marion. May Gallagher, Secy., Marion.
- Apr. 3-4—Wisconsin Superintendents' and Supervising Principals' Association at Milwaukee. G. F. Loomis, Pres., Waukesha.
- Apr. 6-10—Conference for Education in the South at Louisville, Ky. Robert C. Ogden, Pres., New York, N. Y.
- Apr. 8-9-10-11—Alabama Educational Association at Birmingham. W. C. Griggs, Secy., Gadsden.
- Apr. 9-10-11—East Tennessee Teachers' Association at Chattanooga. J. W. Trotter, Pres., Knoxville.
- Apr. 9-10-11—Middle Tennessee Teachers' Association at Nashville. W. B. King, Secy., Ravenscroft.
- Apr. 9-10-11—Eastern Commercial Teachers' Association at Atlantic City, N. J. F. E. Lakey, Secy., Boston, Mass.
- Apr. 9-10-11—Eastern Art and Manual Training Teachers' Association at Atlantic City, N. J. Fred Reagle, Secy., Montclair, N. J.
- Apr. 16-17-18—Louisiana State Public School Teachers' Association at Shreveport. Nicholas Bauer, Secy., New Orleans.

- Apr. 16-17-18—Arkansas State Teachers' Association at Little Rock. J. L. Bond, Secy., Little Rock.
- Apr. 20-25—International Kindergarten Union at Springfield, Mass.
- Apr. 20-25—International Kindergarten Union at Springfield, Mass. Mrs. Mary B. Page, Pres., Chicago, Ill.
- Apr. 23-24-25—Georgia Educational Association at Macon. C. L. Smith, Secy., La Grange.
- Apr. 23-24-25—Georgia Educational Association at Macon.
- Apr. 23-24—Michigan Superintendents' and School Board Members' Association at Lansing. Wm. Carpenter, Secy., Muskegon, Mich.
- Apr. 25—Connecticut Manual Arts Teachers' Association at New Haven. Delmer H. Drake, Secy., New Britain.
- Apr. 27 to May 1—National Music Supervisors' Association at Minneapolis. Elizabeth Caster-ton, Pres., Rochester, N. Y.
- Apr. 29 to May 2—Kentucky Education Association at Louisville. T. W. Vinson, Secy., Frankfort.
- Apr. 30 to May 3—Mississippi Teachers' Association at Jackson. H. L. McClesky, Secy., Hazelhurst.
- May 6-9—Western Drawing and Manual Training Association at Milwaukee, Wis. Miss Emily Dorn, Chairman Local Committee.
- May 9—Boston Manual Training Club at Boston. John C. Brodhead, Pres., Boston.
- May 19-20-21—The National Association of School Accounting Officers at Memphis, Tenn. Henry R. M. Cook, Pres., New York, N. Y.
- June 18-20—West Virginia State Teachers' Association at Parkersburg. C. R. Murray, Secy., Williamson.
- June 29 to July 2—Catholic Education Association at Atlantic City, N. J. Rev. F. W. Howard Secy., Columbus, O.
- June 29-July 2—Catholic Education Association at Atlantic City, N. J. Francis W. Howard, Secy., Columbus, O.
- June 30-July 2—Ohio Teachers' Association at Cedar Point, O. Supt. John K. Baxter, Pres., Canton, O.

TEXTBOOK NEWS.

- State Superintendent J. E. Swearingen of South Carolina has issued a circular requesting catalogs and price lists of books suitable for public school libraries. A revision of the authorized list of titles is being made and Supt. Swearingen is seeking information for revising and correcting the state list. Not only literary excellence but also printing, binding and cost will be considered in the make-up of the list.
- The increasing popularity of "Practical Course in Touch Typewriting" in business and high schools is shown by a recent order received by Isaac Pitman & Sons, New York, for 1,000 copies of this work to be shipped to leading cities in China and Japan.
- A comprehensive textbook on the government and industries of Johnstown, Pa., has been undertaken by Supt. J. N. Ade and the teachers' committees. The text will be used in the local schools and will cover every industry represented in the city including lumbering, coal mining, milling, quarrying and steel manufacturing. A part of the book will be devoted to the operations of the fire and police departments, schools, hospitals, churches, municipal government, public service corporations. A thoro study of these important subjects will give every child in the grammar grades a comprehensive knowledge which will fit into the proposed plan for a co-operative high school.
- Oskaloosa, Ia. Free textbooks were defeated at the March school election.
- The Centenary Changes in Pitman's Shorthand is the title of an interesting pamphlet just issued by Isaac Pitman & Sons. It summarizes all of the important changes and improvements which have taken place in the Pitmanic system of phonography since its author first issued his "Instructor." Copies of the booklet may be obtained from the publishers at 38 Union Square, New York City.
- Notes on Birds is the title of two books just issued by the Comstock Publishing Company, Ithaca, N. Y. The volumes contain accurate outline drawings of the common birds of the United States, and space for field notes on characteristics and habits of each.

16 Years in the Business



M & M PORTABLE READY-BUILT BUILDINGS

Complete Ready To Set On The Foundation

Our rapidly growing cities and towns with restricted school revenues find it difficult to build new school houses fast enough to keep up with the demand made by the increase in population. ON SHORT NOTICE and at a VERY SMALL COST, we are furnishing many of the different towns and cities in the United States with our PORTABLE READY BUILT SCHOOL HOUSES with seating capacity 50 to 250.

When shipped from our factory, they are ready built and complete, ready to set on the foundation. No carpenter work of any kind to be done to them as every piece is finished and fitted. We send a printed illustrated instruction sheet for erecting the school houses and attached to same is a floor plan on which all of the parts are numbered and those in the packages numbered to correspond with those shown on the floor plan. When erected, they are as strong and substantial in every way as if built by a local carpenter, day work. They are thoroughly ventilated and all of the windows arranged so as to give perfect light. WE GUARANTEE ENTIRE SATISFACTION.

We will be pleased to furnish names of the different towns and cities now using them. Write and let us send you a blue print and full detailed information.

MERSON & MORLEY CO., No. 1 Main St., Saginaw, Mich.



The Peabody School Furniture Co.,

NORTH MANCHESTER, IND.

For prompt service
and satisfaction, we so-
licit your inquiries on

School Desks,
Opera and
Folding Chairs



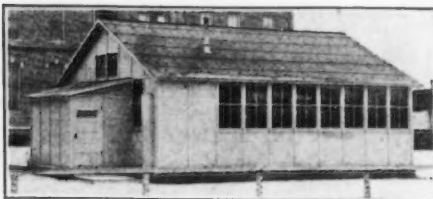
THERE is a world of difference between School Desks and Haney School Desks. Why don't you give us an opportunity to tell you the difference in construction?

Here is what we will do: We will advise you, co-operate with you and aid you all we can. And then we will tell you something about our particular Furniture and make you some prices which we believe will open your eyes.

We have concentrated on this business a third of a Century. We think we know what to put in and what to leave out of Pupils' Desks, Church and Assembly Seating, Book Cases, Tables, Recitation Seats, Artificial Blackboard and General School Equipment.

We say to you we can save you money on anything you wish to purchase in this line. Let us prove it.

Haney School Furniture Co., Grand Rapids, Michigan



IF YOU NEED PORTABLE
SCHOOL BUILDINGS

WHY NOT GET THE BEST?

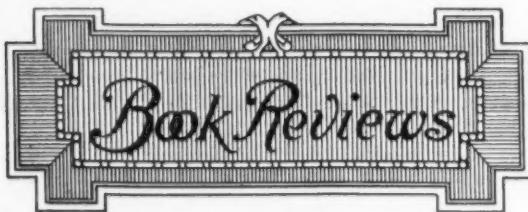
OUR school houses are in use by School Boards in twenty-one States and Territories. They have double walls, thoroughly insulated, are well ventilated, dry, warm and sanitary. Are SECTIONAL and PORTABLE: Can furnish record and locations of several that have been moved and re-erected seven and eight times each. Any size: Open air and two rooms when desired.

SEND FOR OUR PLANS AND PRICES

AMERICAN PORTABLE HOUSE CO.

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SEATTLE, WASH.



The Real America in Romance.

By Edwin Markham. Thirteen Volumes. William H. Wise Co., Chicago and New York.

History—the record of events written for the instruction of mankind—has, all too frequently, the fatal defect of being a dry-as-dust study, undertaken as an unwilling task by adolescence, and by the spur of cultural necessity by those of maturer years. There are, today, thousands of people of whom it would be true to say that they have not looked into a history since they left school.

It is probable that the real cause of this general disregard of history and its lessons of life lay in the way that, as a general thing, history has been written—and taught. The dry statement of battles, the long lists of dates, another of kings, etc., presented to the youthful mind of less than a generation ago, historical knowledge that was dry, stale, flat and unprofitable—especially the latter, from an instructional point of view.

The science of pedagogics has made vast strides within the last decade and a half. Many old theories and practices have been abolished, and with a broader and saner system of child study, the best teachers have recognized the fact that knowledge is more easily absorbed and retained when accompanied with a quickened interest. Notwithstanding some excesses in practice, the best pedagogic skill today is being directed in education, not to the elimination of all effort on the part of the child, but to train and intensify the effort necessary for mental discipline by the injection of a keen interest in the subject taught.

Edwin Markham, the poet, has succeeded in presenting the main facts of our history in a remarkably interesting way.

The Real America in Romance is a series of historical tales concerning our country's history for four centuries which, to the writer of this review, seems to mark an era in the writing, and consequently the teaching of history. The story is woven around the boy who is known to have accompanied Columbus. He is Hernando, the

lost son of the noble house of Estevan, and becomes the center of the romance of the first volume of the thirteen. The different romances of succeeding generations are continued thru his son, Christopher, his grandsons and great grandsons, until the descendants of the original Estevan are with Dewey at Manila and with Roosevelt and his Rough Riders in Cuba. With this thread of continuity, and around these charming stories, are clustered the facts and persons of American history in a really charming way.

Picturesque writing with a clever arrangement of historic sequences appears to be the forte of the author of "The Man with the Hoe." In a better way, in some sense, than Macmaster, does he describe in graphic pen-pictures the life and manners and habitations of the period of discovery, the colonial, and even our own time. Dress, customs, language idioms, are all given with a vividness and an atmosphere, together with the glamor of adventure that makes the reading of the volumes a pleasure as well as a source of knowledge. No principal historical event is omitted and yet each volume contains a delicate love story in connection with some descendant of the original Estevan.

Altho the philosophical tone is absent, the historical spirit is, however, in evidence, and all religions and all political parties are treated with impartiality and fairness. If more works in this spirit were written, history could no longer bear the reproach that for generations it has been a conspiracy against the truth. This is said after a careful reading of the volumes.

The many charming literary touches are enhanced by the mechanical perfections of the volumes. Large type, on fine paper, and excellently bound in finely tooled, flexible covers, make the work a joy to the bibliophile, and the illustrations are satisfying from an artistic standpoint.

Vacuum Cleaning Systems.

By Maxwell S. Cooley. Cloth, 244 pages. Price, \$3, postpaid. The Heating & Ventilating Magazine, New York, N. Y.

This volume is the result of seven years of experience which the author has had in the preparation of specifications for, and the testing of, vacuum cleaning plants in buildings of the United States government. During these years he has personally investigated, at the factory, and has tested every new type of vacuum machine and tool which has appeared.

This discussion of the subject is not only comprehensive but also authoritative. Outside the introductory chapter which treats historically of

the first beginnings and of the development of compressed air cleaners, which later by a curious reversal of principle became vacuum cleaners, the book limits itself to a technical discussion of the mechanical and economical aspects of vacuum producers, tools, piping, separators and scrubbers. School-board officials and architects will find the chapters on the requirements of ideal vacuum cleaning systems and on the selection of and specifications for systems of considerable interest and value. Mechanical engineers will welcome the work as the first attempt to state authoritatively the essential mechanical and efficiency elements of vacuum cleaning systems.

Materials and Methods in High-School Agriculture.

By William G. Hummel and Bertha Royce Hummel. 385 pages. Price, \$1.25. The Macmillan Co., New York.

The agricultural sections of our country are indebted to California for this well-proportioned, readable and suggestive book. It is designed for high schools where large numbers of the students are drawn from the farm population or where the prosperity of the high school is largely dependent upon Agriculture. Its aim is to outline the Agricultural course, as a whole, for such high schools, and to give helpful suggestions as to the selection of suitable material, teaching methods and equipment for the various subjects of the course. This notice might stop with the comment that the book has realized its purpose, but it is really too valuable for so curt a mention.

A brief historical sketch of distinctly Agricultural schools in different states is followed by an argument for the introduction of this study into many high schools. The state inspector told a recent meeting of county superintendents in Madison, Wis., that Wisconsin has 63 high schools now giving four-year courses in Agriculture while practically all its high schools are giving some instruction in this subject. This shows the trend of public opinion in one state.

Judgment and moderation have been shown in discussing the Agricultural equipment of the high school under the heads of: (1) the laboratory; (2) the school farm; (3) the Agricultural library; (4) illustrative exhibits. Only essentials to be purchased at first, but these good of their kind is the motto.

Much thought has been given to first-year work in Agriculture. Plant life and growth should be the subject. Preference is here given to the name "Beginning Agronomy." Properly presented, it will lead students into various fields of



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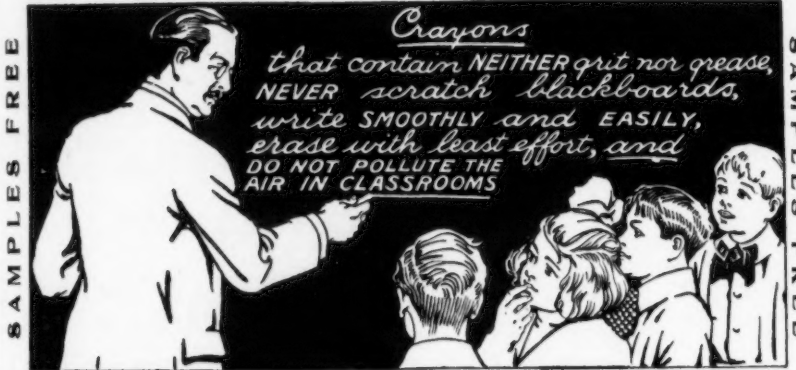
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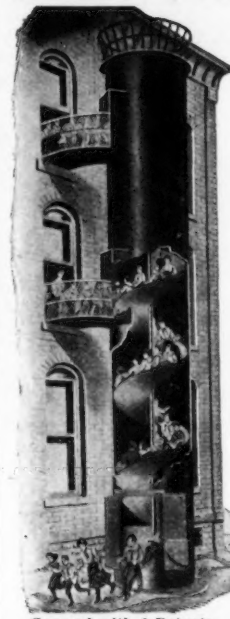
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of Education, New York, N. Y. Price,
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The outlines of study, the lists of desirable circulars, bulletins, reference books, the practical bits of work set, the visits of observation, the experimental work in home gardens, school gardens, school farms, create a conviction of the interest, variety, future possibilities latent in Agriculture.

Prevention and Control of Disease.

By Francis Ramaley and Clay C. Giffin. 386 pages. \$3.00, postpaid. Published by the author at the University of Colorado, Denver, Colo.

The study of hygiene, i. e., healthful living, is now rightfully emphasized in schools and colleges to the practical exclusion of technical physiology. The modern teacher believes that it will be more helpful to children to know how to eat, sleep, bathe, exercise and rest than to memorize long lists of Latin names of minor cells and lesser organs of the body. The present book is a further extension of the idea of teaching hygiene to college students and to adults, especially parents, nurses and teachers. It is a thoroughly scientific textbook on the theory of disease, the characteristics of the more common children's, filth, contagious, infectious and other diseases from

the standpoint of the layman who wishes to live a healthy, normal life and to ward off illness to the greatest possible degree.

The authors approach the subject in a common-sense, practical way that reveals broad experience and an accurate knowledge not only of the newest advances in medicine and hygiene but also of the everyday living conditions in the United States, of human foibles and frailties and popular misconceptions, prejudices and errors. The book may be heartily recommended.

The Magic Chest.

By E. Elliot Stock and Ernest Brumleu. 64 pages. Price, 90 cents, net. E. P. Dutton & Co., New York.

The ancient Greek legend of Pandora and Her Box here takes the form of a one-act musical play, "The Magic Chest." Sprites dance in and out, singing choruses, while the effect of monologues and dialogues is enhanced by the frequent use of a soft musical instrument. Amateur managers are told exactly how to provide the simple setting and costumes. The stage directions include not only entrances and exits, but movement, pose, expression, gesture. This play seems just fitted for an artistic term-end, or private house entertainment, for boys and girls of from 8 to 18 years of age.

Nature's Wonder Lore.

By Mary Earle Hardy. 143 pages. 50 cents. Rand, McNally & Co., Chicago.

A little barefoot boy is called a king. A good name, too, since he had seeing eyes and hearing ears. Not all, are so well off. When he had gone under on arching oak the chattering brook would tell him how it had slowly polished jagged

pieces of rock into smooth pebbles and the ferns would whisper to him their secrets. At night the wise Merlin would read to him the stories Nature had written upon stones. Little by little he learned how rocks have been formed, how mountains have got their pinnacles, how water has eaten out great kettles and deep caves, until he was filled with a passion "to read what was still unread in the manuscripts of God."

Many facts of geology have here been well told in poetic prose. The end papers, the drawings, the photographs of well known natural formations do not belittle the text. More need not be said in their praise.

Children's Parties.

By Gladys Beattie Crozier. 119 pages. Price, 50 cents, net. E. P. Dutton & Co., New York, N. Y.

Children's Indoor Games.

By Gladys Beattie Crozier. 120 pages. Price, 50 cents, net. E. P. Dutton & Co., New York, N. Y.

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By Gladys Beattie Crozier. 114 pages. Price, 50 cents, net. E. P. Dutton & Co., New York, N. Y.

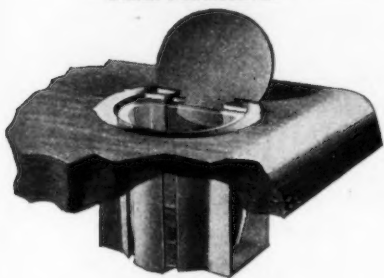
A versatile woman has written and also illustrated three helpful books. These will prove friends in need to many a grownup planning indoor or outdoor games for children. The phrases egg polo, garden archery, visits to London museums, cost of costumes, given in shillings and pence, tell us the author is English and has written first of all for English children.

However, many of these games, under one name or another, belong to childhood the world over.

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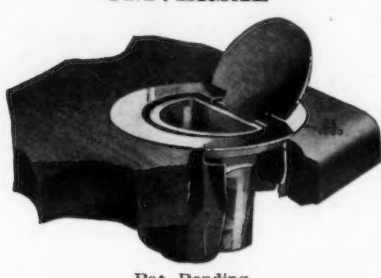
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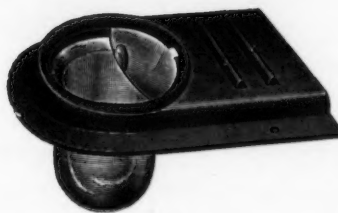
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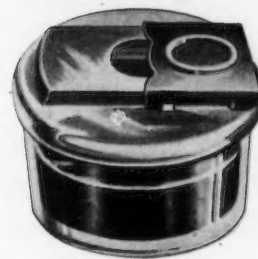
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Introduction to Botany.

By Joseph Y. Bergen and Otis W. Caldwell, 376 pages. Price, \$1.15. Ginn & Co., Boston.

Service to average secondary pupils has determined the scope of "Introduction to Botany." As a plant is an organism with a living to make—an organism that is forced to maintain its existence under conditions that are sometimes favorable and sometimes unfavorable to it—prominence has been given to those forces and agencies that enable plants to live. The structure and work of roots—those food purveyors of plants—are first explained. Stems—the carriers of nutrient sap—and leaves—the lungs and laboratories of plants—are next considered. Flowers, pollinization, fertilization, fruit, seed, complete the circle of plant life.

A writer in a recent newspaper has deplored the gross ignorance of many farmers about budding, grafting, pruning. With what pleasure he would examine the paragraphs and wood-cuts relating to these subjects. The chapters on forestry, plant breeding, weeds, fungi, and fungous diseases of plants would likewise receive his hearty commendation.

At first glance, new technical terms may seem too numerous. But much present-day thought has been packed into one scientific term; while the glossary defines what the text may possibly leave undefined. Of the 250 illustrations, many are delightful as pictures, all are important as studies. Full-page portraits of Julius Sachs, Charles Darwin, Louis Pasteur, Asa Gray, with a short sketch epitomizing the work of each give honor to whom honor is due.

It is much to have this scientific statement of the structure, needs, growth of plant life as a basis of some intelligent understanding of great plant industries.

Essentials of Physics.

By George A. Hill, Harvard College. 344 pages. Ginn & Co., Boston.

The experiences of life bring convictions. In this instance, experience has convinced the author that the simplest and most efficient method of teaching the elementary principles of physics is by question and answer.

"Essentials of Physics" has been written on this basis. Clear, brief, pointed questions have been followed—in case the student cannot be expected to answer them correctly—by equally clear, brief, pointed answers. In some textbooks, some of these answers would be labeled definitions. Explanations of diagrams have the same qualities as the questions and answers. A noticeable feature is the unusual number of numerical problems which form the major part of work under every principle. In connection with the study of each force, as, motion, heat, light, sound, come review problems and a statement of important truths. It is argued that the solving of problems that demand for their solution the application of a physical principle is most effective in overcoming the inertia of student mind toward receiving a knowledge of physics.

Generous acknowledgments have been given to those who have aided in weeding out errors of expression and in improving the wording of statements. The author and his friends have certainly achieved a clarity of expression seldom equaled.

The Montessori Method and the American School.

By Florence Elizabeth Ward. 243 pages. Price, \$1.25. The Macmillan Co., New York, N. Y.

This is one of the best commentaries on the Montessori Method; a valuable bibliography carries the matter to completeness. Like everything new, this method was hailed by many as a panacea—as the final thing in kindergarten work and now that this stage is over, the real task of arranging and applying the essential ideas underlying it is receiving attention. The kinder-

garten teacher will find the present book very illuminating and useful.

The Tragedy of Education.

By Edmond Holmes. 100 pages. E. P. Dutton & Co., New York, N. Y.

This work deals with the Montessori ideals, but from a larger standpoint. The author is quite pessimistic and gloomy over the outlook unless we immediately give boundless freedom in all directions to the growing child. Dogmatism is the tragedy he speaks of. Some things are well put and well argued; but after all, his program is too far-reaching and radical to be more than a dream.

Teaching of Mathematics.

By Raymond E. Manchester. 75 pages. C. W. Bardeen, Syracuse, N. Y.

This is a very useful summary of the principles underlying the matter; a teacher who has not access to the larger texts would find much profit in reading this essay. As to geometry, Professor Manchester wishes the text propositions to be merely instances and models with which, and according to which, to solve original exercises; and in this he is altogether right.

Medical and Sanitary Inspection of Schools.

By S. W. Newmayer, director of child hygiene, Bureau of Health, Philadelphia, Pa. 318 pages. Published by Lea & Febiger, Philadelphia and New York City.

A very comprehensive and interesting guide to medical inspection of pupils based upon fifteen years of experience which the author has had as a medical inspector and director of child hygiene.

The book is written from the administrative standpoint and goes into rather particular details on the organization of school medical departments, the duties of physicians, nurses and teachers, methods and records of inspections. The author's ideas on school architecture, while clear and correct, are not borne out by the illustrations he gives, particularly the plans of a Toledo schoolhouse (pages 102-103) which are grossly defective in lighting, arrangement of cloakrooms, etc.

The second half of the book, which takes up in detail the diseases and defects to which children are subject, is a valuable contribution to the

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The author's treatment of the very technical subject matter of the volume is interesting and direct; the illustrations are complete and helpful.

SCHOOL TRADE NOTES.

The Nicholas Power Company, New York City, has issued a warning against swindlers representing themselves as authorized by this firm to demonstrate the Power Motion Picture Apparatus. The firm requests its patrons to refuse to cash checks for any one purporting to be a representative, without a thorough establishment of identity.

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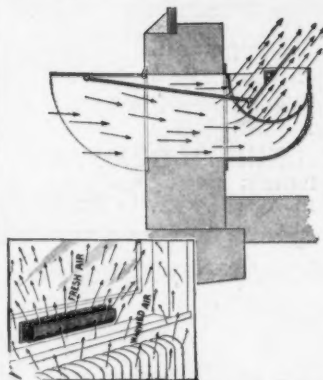
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PROMOTION OF PUPILS.

By Supervising Principal George W. Mitchell, Johnsonburg, Pa.

During recent years much has been said and written concerning the best methods of determining the promotion of pupils. The matter appears to be quite simple, in fact is simple when it pertains solely to those pupils who attend school regularly and learn well the lessons of each day. But a real difficulty arises when the matter involves pupils who do not attend regularly or who do not learn the lessons assigned. The general impression that the work of the school is divided into stages which differ from one another in subject-matter and degree of difficulty is practically correct. A fairer view of the matter, however, is that the course is a unit, each lesson mastered becoming the foundation for the next. It follows, therefore, that general mastery of all subject-matter as it is presented is highly essential to advancement, in fact is in itself the only real advancement.

The question of promotion, dealing as it does with pupils grouped in classes, is whether a particular pupil has mastered the work of a specially designated period to a degree sufficient to enable him to deal effectively with the subject-matter which is to be presented during the next interval. In the lower grades this interval, or period, is comparatively short, but in the upper grades, it is practically a year. In the new outlines prepared by the Supervising Principal for the Johnsonburg schools all subject-matter of the elementary course has been grouped in sixteen divisions, each group thus constituting a half year's work. But the organized classes in the various rooms, particularly lower grade rooms, are not so far apart in their work as this division might suggest. Pupils are classified as 1B, 1A, 2B, etc., the numeral indicating the grade or year, B denoting the first half of the grade or year, and A the second half. Some classes are able to proceed more rapidly than

others, such classes being made up of the pupils who show the greater capacity for work. Naturally there is greater opportunity for a close classification in the lower grades than in the higher because of the greater number of classes in each of the lower grades.

In assigning pupils to groups the judgment of the teacher figures very largely. This judgment should and does take into account factors other than mere percentages in recitations and examinations. Class marks, examinations, habits of study, age, and general health are some of the data which enable the teacher to form a judgment. In addition to these, the time the pupil has already served in a grade, unusual conditions under which he has worked, the probable length of time he will spend in school, and possibly other factors more remotely connected with the case, are within the legitimate range of the teacher and supervising principal in deciding individual cases. The main weight is likely placed upon certain subjects, such as reading in the first and second years; and arithmetic, grammar, geography, and history, in upper grades. The common practice in the schools of the country today is to draw no hard and fast lines, but to decide cases upon their respective merits.

In the Johnsonburg boro schools tests are given in January and also in May, not merely as final examinations, but rather for the distinct purpose of trying out the efficiency of the teaching and of the teachers. Pupils who meet all requirements in class and in the special tests given are advanced without question. Those who fail to measure up to the standards thus established are considered individually, all the factors previously mentioned in this article being taken into account.

It may be said that such a plan involves more than one standard of promotion. The objection loses all force, however, when it is considered in connection with the really vital object of the schools. Schools, courses of study, standards of

measurement and attainment, are at best only incidentals. The child is the central figure in the matter and is the only subject worthy of vital consideration. Everything else is intermediary. Much of the argument for hard and fast standards has at foundation, not the incontrovertible fact that schools are supported for children, but rather the fallacy that children are reared for the purpose of maintaining some vaguely-conceived, perfectly uniform school system. The teacher today who is alive to the situation is teaching children rather than subjects; is transforming pupils rather than establishing school standards; is bending every energy of mind and hand and heart to stimulate and inspire pupils to earnest, unremitting effort to excel their own previous attainment, rather than aiming to conform to some set method of procedure.

This does not imply that pupils will be advanced regardless either of their ability or inability to master the work of a grade; or of their inclination or disinclination to study; or of regularity or irregularity in attendance. The paramount aim is to have pupils do their work well in order that the necessity of having them repeat the work of a grade or class be avoided. Subjects which are not understood are of but little value to the child, but repetition of work is beset with many disadvantages. Children become discouraged, dissatisfied, and frequently fail to take the interest in study which is essential to the best results. The larger cities are able to maintain special classes for those who fail, but such a plan could hardly be made successful in the smaller towns. Those who fail are practically obliged to repeat the work with the next class below, but the less of this repetition a school is obliged to have the better.

It hardly need be stated that whenever a pupil shows that the work of the class in which he is enrolled is not commensurate with his ability, his classification should be changed. Outright

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devotion is to be avoided whenever possible, and frequently a pupil who is found to be weak is permitted to remain with his class for a time, until the next lower group of pupils take up that particular work. This involves repetition, but the course can hardly be avoided. On the other hand, if the work of a particular class is found to be too easy for a pupil, that pupil should be advanced forthwith, provided the gap between classes is not too great for him to overcome with proper effort and within a reasonable time.

The high school presents a distinct problem, because here the pupil is held responsible for the subjects individually. Failure to master the subjects the first time they are taken necessitates a repetition in some form, either in class or with the help of a private tutor.

AN INTERESTING GROUP OF SCHOOLS.

(Concluded from Page 19)

the heavy machinery and benches for teaching these subjects.

The art room occupies the greater part of the second floor and provides an extensive department, arranged, lighted and equipped for the teaching of advanced and elementary art. Life, antique, modeling, architecture, signwriting and graining classes are provided for. There are separate cloakrooms and lavatories.

The bakery and confectionery room is located on the ground floor and is fitted up with the latest type of double-decker oven, hot plates and laboratory tables. Adjoining the bakery is the cookery kitchen for serving the two lunchrooms

which have been provided and fitted up for the use of the pupils.

Rooms have also been provided for the teaching of sewing and needlework, typewriting and music, while there are also special rooms set apart for reading.

For the subjects of cookery, housekeeping and laundry work a separate department is provided in a block to the south of the main building and adjacent to the girls' entrance. Fully equipped rooms are provided for these subjects.

The rooms are fitted thruout in the most complete manner, the noteworthy feature being the simple decoration of a home, lighting arrangement, heating and ventilation installation and the introduction of the synchronous clock system.

The main building is heated with vacuum steam, with the installation in three sections. Any one section can be put out of action, without interfering with the others, by means of a control board fixed in the boiler house. A mechanical exhaust system of ventilation has been adopted for the building. Fresh air is admitted in the classrooms thru registers fitted behind the radiators, the latter being located in the window bossings. In the walls opposite the windows, flues are provided which connect openings in the various rooms with a main duct in the basement.

The vitiated air is drawn from the rooms thru the flues, above mentioned, to the main duct by means of a powerful centrifugal fan and is dis-

charged by the latter to the atmosphere thru a foul-upcast shaft, which terminates on the roof with a weathered turret.

The installation of electric lighting and power are on the most approved lines, while the electrical apparatus provided embodies the most recent practice. Great care has been exercised in the lighting of the mechanical drawing room, manual training room and art department.

The timekeeping system is also operated electrically. It consists of upward of 45 clocks, fixed thruout the building and the large one in the facade of the school, all worked from the master clock in the rector's room. The system affords a more precise timekeeping than the ordinary system, with much less attention and greater durability.

The primary school building is at the rear of the main building and is surrounded with playgrounds for boys and girls. It contains six classrooms, grouped around a central hall, and provides accommodations for 240 scholars and rooms for the superintendent and teachers. At the rear of the primary school, a portion of the playground has been laid off as a garden for botanical work.

Externally the buildings are dignified and expressive of their purpose in a simple treatment of Renaissance architecture massed and boldly grouped and treated with reticence and refinement in the various parts.

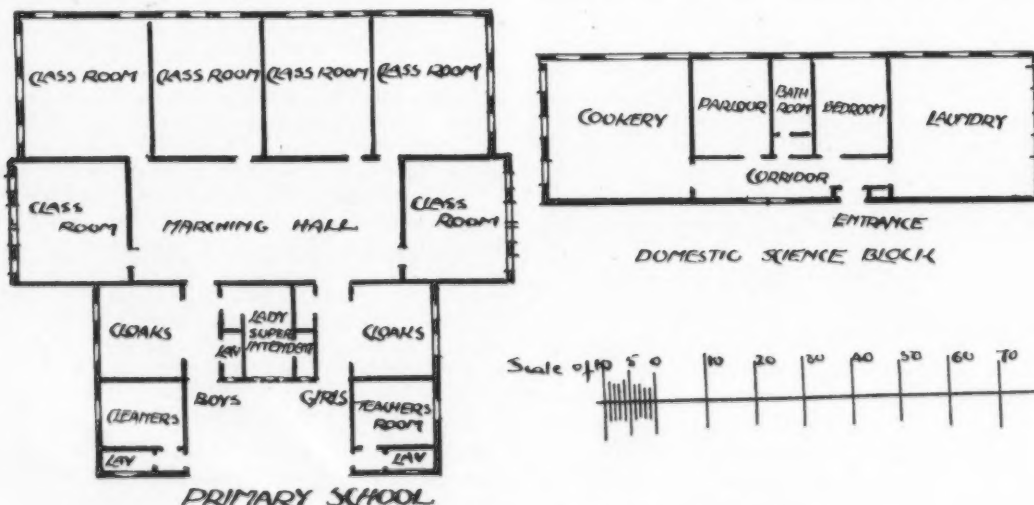
The architects are Messrs. Cullen, Lochhead & Brown.

GLARE IN SCHOOL ILLUMINATION.

(Concluded from Page 23)

mentioned electrical energy is supplied by the school's plant and therefore an increase of fifty per cent in electrical energy would be only a slight factor from the standpoint of cost, yet the lighting would be changed from a very bad condition to the most approved system for drafting rooms.

Fig. 4 shows a condition in the machine shop of a technical school which presents very great difficulties from the standpoint of lighting. The many belts and overhead shafts make it impossible to light these shops with units hung high and well distributed. Originally these shops were lighted wholly from the local units each machine operator having control over a unit on a long wire cord. At the suggestion of the writer the condition was somewhat improved by installing the large units overhead. In Fig. 5



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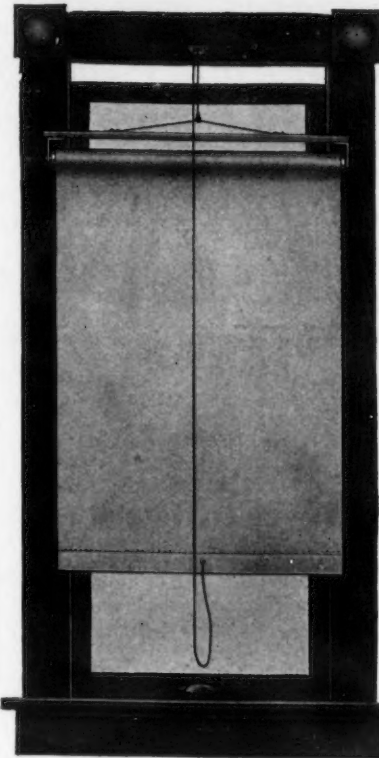
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is shown a close view of the nearby light units which confront the operator of a machine. These lamps have clear bulbs so that the bright filament is visible to the operator within a foot of his eyes. Such a condition not only damages the eyesight of the individual but develops a tendency to misuse light which no doubt persists long after the student has been graduated from the shop or drawing room. In such cases as shown in Fig. 4 and 5 where conditions demand local units it is far better to use opaque metal reflectors completely screening the lamp.

Many principles of hygiene are taught in the schools and better opportunity is afforded to exemplify the proper use of light which involves our most important and educative sense. However, there seems to be a general neglect in the consideration of lighting. For instance in a domestic-science department where the girls are taught the science of home-making the model dining room was lighted by bare lamps on very low wall brackets and the model laundry was lighted by bare lamps suspended upon long cords. In fact this same condition of bare lamps is illustrated on page 10 in the December, 1913, issue of this JOURNAL where a group of girls are shown engaged in a part of the home-making course. The effect of lighting is recognized as of great importance in the home yet these illustrations show that little attention is paid to proper lighting in training girls in the essentials of home-making.

In Fig. 6 is shown a typical example of the very bad conditions found in the wood-shops. Here overhead general lighting from distributed light units is quite feasible, yet the worst con-

dition of glare is actually found. The student at one of the tables in the foreground can see perhaps twenty bare lamp filaments scattered about the room on a level with his eye. These bright images no doubt exhaust the retina and may do permanent injury. At any rate there is a contraction of the muscles controlling the iris in an endeavor to protect the eye from such abuse which results in discomfort. After-images and the general glaring conditions are also

dangerous to the workman in moving around machinery in a half-blinded state.

In Fig. 7 is shown a very good lighting system for a foundry in a technical high school. The light units are hung high and the reflectors are translucent so as to illuminate the ceiling. This eliminates excessive contrast of the light unit against an otherwise dark ceiling. With bowl-frosted lamps this condition is quite perfect.

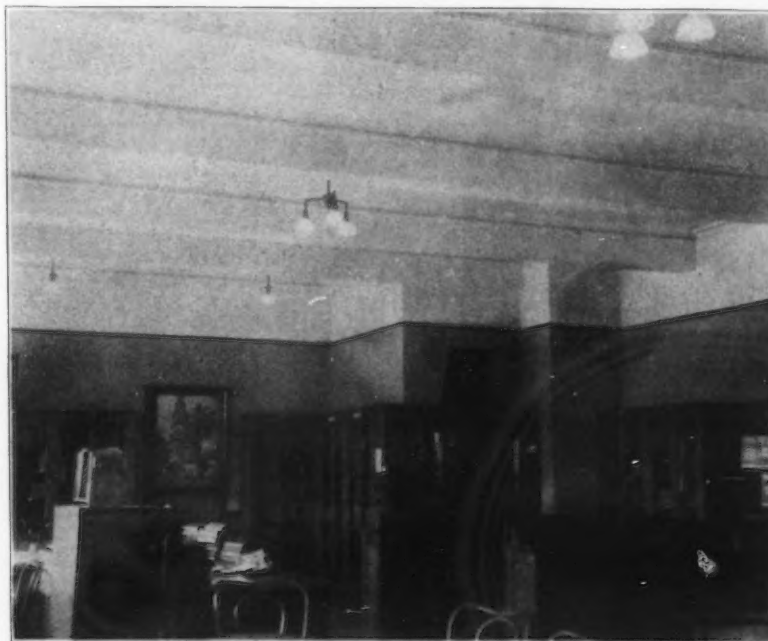


FIGURE 9.

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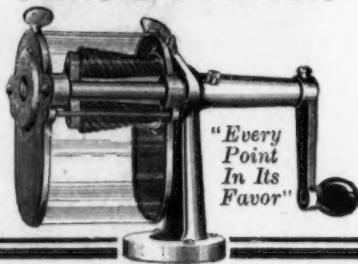
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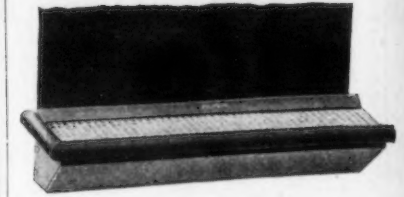
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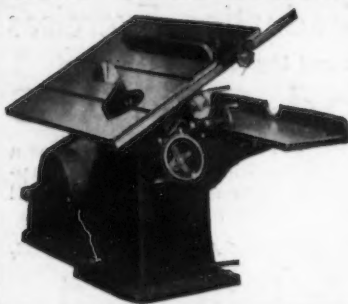
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Figs. 8 and 9 illustrate good lighting in a study hall and library respectively. No local units are found in these rooms which is a very satisfactory condition. Clear lamps are usually found in the glass reflectors. It will be found that a bowl-frosted lamp is far more aesthetic in appearance and more satisfactory from a hygienic standpoint.

A few examples have been presented in the foregoing to illustrate the principles of good lighting and to show that the problem of school lighting is a diverse one. In general the slogan of good lighting is "Light on the object, not on the eye." Such a condition is best brought about by general lighting from well distributed units hung high out of reach of the student and well above the line of vision. The lamps should be screened by reflectors which also distribute the light in a proper manner.

The subject of school lighting is almost as broad as illuminating engineering itself so that only a superficial account can be given in a brief article. The foregoing has been devoted to a discussion of glare from primary light sources with the hope of setting forth a few of the harmful conditions commonly found. To the schools are entrusted the youth of the country. Good lighting is a requisite to the conservation of eyesight and is a factor to be considered in school hygiene.

SELECTING A SCHOOL ARCHITECT.

(Concluded from Page 10)

hinges on the amount and accuracy of information at hand, on fluctuation in market value of labor and material, and on the uncertainties in different contractors' overhead charges and profits as represented in their estimates. Obviously no preliminary estimate can be entirely

dependable; tho a sufficient allowance for contingencies can make it enough so for practicable purposes. Nevertheless, it is still more satisfactory to a board to have figures to work upon which are backed by the certified checks of the contractors.

An effort is sometimes made to get an architect to guarantee his estimate with a bond or certified check. But, inasmuch as he must then have a definite contract on which to found such guaranty, and as that contract is for the construction of a building of which no legal description is in existence, it will readily be seen that the giving of such bond is of questionable value until after the drawings and specifications have been made and passed. Instances are on record of architects having used the offer of a guarantee bond as a matter of business getting and of having later demonstrated its absolute worthlessness. The architects of California are today embarrassed by the existence of a State law requiring such bond on public buildings—relic of the time when the old-fashioned "Architect and Builder" was the chief constructionist.

If we have now steered our building committee away from the rocks of the architectural competitions and out of the pirate hands of the "specialist" into the safer haven of the conscientious near-at-hand practitioner of good standing, we feel sure that the structure will be as well taken care of as the funds at hand and prevailing local conditions will permit.

Let us hope that the architect may not be unduly hindered by undue economy or overplus of officiousness from the members of the board; He has more at stake than they, both in the present outcome of the matter and in later developments; he is still the architect of the

building long after the personnel of that particular board is forgotten.

THE BLOOMINGTON HIGH SCHOOL.

(Concluded from Page 14)

opens out from this story. At each side of the assembly room gallery are the pupils' cloak-rooms.

The main corridor, 12 feet wide, runs from the north to the south end of the building with the staircase at the ends, the same as the first story.

The Third and Fourth Stories.

The third story has main corridor and stairs, boys' and girls' cloakrooms, the same as the second story. There are five regular classrooms on the third story ranging in size from 20 feet by 24 feet to 24 feet by 32 feet. On the front of the building in the third story are two rooms for the commercial department, one seating 25 pupils and the other seating 30 pupils.

The fourth story contains a gymnasium, which is 90 feet long and 51 feet wide, and 22 feet 6 inches high. It is provided with a gallery running track which can also be used by spectators. The gymnasium is provided with a full and up-to-date equipment. The running track is covered with cork carpet. Connected with the gymnasium are locker rooms, shower baths, and a room for the gymnasium directors.

Across the front of the building in the fourth story are laboratories. Beginning at the north end is the physical laboratory, 29 feet by 30 feet; a storeroom, 10 feet by 22 feet; a lecture room equipped with a platform and chairs for fifty-four pupils, 26 feet by 37 feet; a photographic dark room, chemical supply room, and chemical laboratory, 26 feet wide and 39 feet long; a biology supply room and a biological

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Prof. Wm. A. McKeever, University of Kansas, says: These books touch the heart of the learner perhaps as nearly as can possibly be done. They are a worthy companion series to the Searson-Martin readers, and that is certainly paying them a high compliment.

Supt. R. E. Cochran, Kearney, Nebraska, says: We have them in all our fourth, fifth, sixth and seventh grades, and the universal testimony of the teachers is that spontaneous and original English work is being brought out this year much better than ever before. My own personal observation tends to make me feel that the pupils are getting the grammar soaked into them unconsciously. The Driggs books have been an unqualified success so far.

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All classrooms are provided with bookcases. The classroom windows have prism glass in the upper sashes and throw the light to the far side of the room, and all sashes have metal weather strips.

The stairs are entirely fireproof and are constructed of iron with soapstone treads and platforms, and enclosed in brick walls. The assembly room is lighted from a large skylight with wire glass and has a leaded glass ceiling.

All plumbing thruout is open and of the most sanitary construction. The building is lighted thruout with electricity, and is piped for emergency gas lighting.

In the principal's office there is a bell-board which rings bells in all rooms thruout the building, and a program clock. There is also a switchboard and a telephone apparatus communicating with rooms in all parts of the building.

In each hall thruout all stories of the building there are two sets of full size fire hose; there are

fire gongs in the halls of every story, in the gymnasium and assembly room, which can be operated from several parts and can also be rung from the switchboard in the principal's room.

The building is heated by steam, the air being brought in thru shafts from the top of the building down to the basement and drawn thru steam coils and then forced by blower fans thru the warm air flues to the various parts.

The building accommodates 500 students now, and may be enlarged to double its present capacity. The cost is as follows: building, \$190,000; furniture, \$30,000; ground, \$16,000; total, \$236,000.

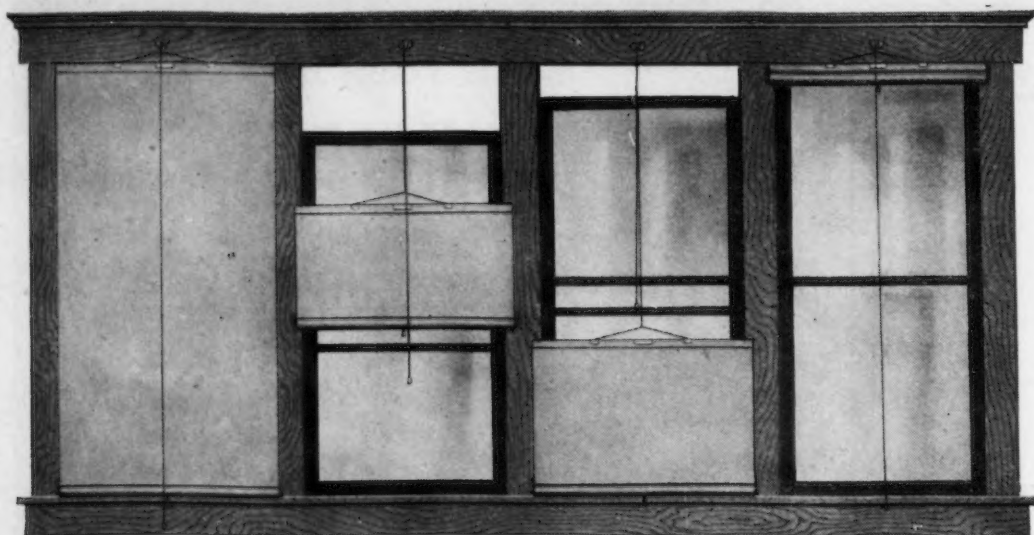
The architect is Mr. C. Granville Jones, New York City.



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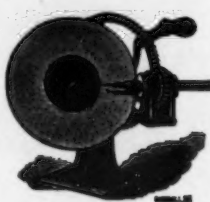
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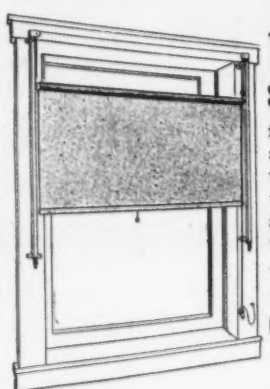
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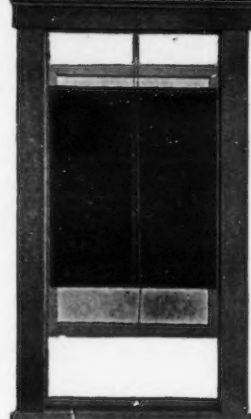
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THE ELECTRIC HIGH SCHOOL.

(Concluded from Page 21)

supplies all the power needed for the lathes and saws in the manual training department. An electric water heater furnishes the hot water for the domestic science department, for the shower baths, for the various lavatories and for the domestic science rooms. Even the large ranges for the cafeteria lunchroom are heated electrically and a dryer for the table linen and other washing is operated by electric power.

In the science laboratory electric hot plates are provided for evaporation purposes and each pupil has an electric appliance to take the place of the ordinary Bunsen burner.

The electric lighting system includes not only illumination for the classrooms, corridors, etc., but a complete stage equipment and switch control in the auditorium. The lighting equipment of the auditorium has been planned for making the school a model "community center" in which theatricals, lectures and motion picture shows are offered.

The entire electric equipment was planned by local electricians with the assistance of the United States Government engineers at work on the Minidoka Project. The Government generates electric currents at the Minidoka dam for use in pumping water into high-line ditches during the irrigation season. This power is of no use to the Government during the winter and is sold for lighting and heating purposes thru the Rupert Electric Company. A flat rate of \$1.00 per Kilowatt per month is made—an

exceptionally low rate—cheaper than coal which sells at about \$6.75 per ton.

The rate for lighting, power and water heating is on a metered basis as follows:

For light—7c per K. W. hour for the first 25

K. W. used; 6½c for the next 25 and 6c for the next 50.

For power—5c for first 100; 4c for the next 100; 3c for next 300.

For water heating—1c for first 100; .9c for next 100; .8c for next 100; .75c for next 100; after that .7c.

In installing the electric heating system in the Rupert high school it is estimated that the cost will vary from \$1,500 to \$1,760. Coal might be used at approximately \$1,000 per year but the use of electricity saves the wages of a fireman at \$75 per month. In addition the installment of the electric system involved a saving of \$3,000 over the cost of boilers, steam radiators and piping and the interest on this investment is thus saved. Thus far the electric heating system has proven to be a positive economy.

Among the novel electric apparatus in the school is a compact little device which heats the water storage boiler keeping it at a uniform temperature automatically. Another device is called a solenoid by which the current is shut off automatically when the heaters become too warm at night when the fan is not in use.

The building cost, without furnishings, but including heating, wiring, plumbing and septic tanks, \$47,000. This is only 15.7 cents per cubic foot or \$235 per student.

The architect of the building is Mr. John Visser of Boise, Ida., and the building is presided over by Mr. Geo. L. Dilworth, superintendent of schools.



R. E. PEIFER,

Secretary, School Board, Easton, Pa.

Mr. Peifer was, in February, elected as the first president of the newly organized Association of School Board Secretaries of Pennsylvania. With his associates, Mr. Peifer has begun an inquiry into the business methods of urban school boards in Pennsylvania to increase the efficiency of administration and incidentally, to elevate the standard of the office of secretary.

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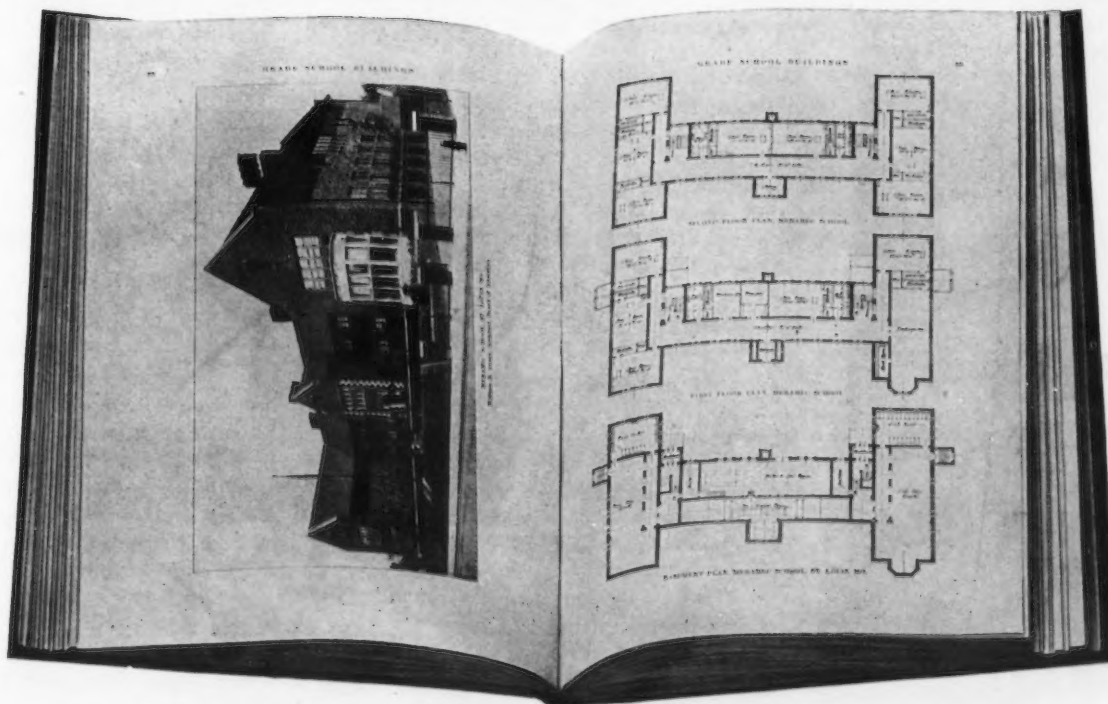
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Editor American School Board Journal



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Too Much at Stake.

The question for discussion before the debating society that had met in the little school-house belonging to District Number Thirteen was this: "Resolved, that the works published under the name of William Shakespeare were really written by Lord Bacon."

The debate was fierce and prolonged, according to the Youths' Companion, but, as frequently happens in such cases, the disputants on one side had informed themselves thoroly, while the others, relying upon their having the popular side of the controversy, depended solely on their oratory. Hence the "Baconians," having learned all that could be said in favor of their contention, made really a very plausible case, and had decidedly much the better of the argument. At the close of the discussion the three judges who had been selected held a brief consultation, and decided in favor of the negative.

"Why did you decide against us?" subsequently asked one of the disputants. "You know we presented good arguments, while the other fellows didn't show any."

"That's all right," answered the judge to whom this question was addressed, "but two of us had just bought expensive copies of 'The Works of William Shakespeare,' that cost us fifteen dollars. Do you suppose we were going to acknowledge that Shakespeare didn't write 'em?"

"You can't solve even the simplest problem, Arthur!" reproved the teacher. "Now, try this one. If your mother wants to boil eggs for supper, and she has seven eggs, and three of them break, how many can she boil?"

"She wouldn't boil any of them, please teacher. She'd scramble them all."

Sine Qua Non.

"Do you think a college education affords a man an important advantage?"

"Oh, yes! One has to have it in order to get into a university club."



Hard Luck.

"Well, sonny, what are you crying for?"
"Teacher sent me for a sheet of blotting paper, an'—an' I got caught in the rain."—
Meggendoerfer.

THE NATURAL BOY.

O, for the glimpse of a natural boy,
A boy with a freckled face,
With forehead white 'neath the tangled hair,
And limbs devoid of grace.

Whose feet toe in, while his elbows flare,
Whose knees are patched all ways,
Who turns as red as a lobster when
You give him a word of praise.

A boy who was born with an appetite,
Who seeks the pantry shelf
To eat his "piece" with resounding smack,
Who isn't gone on himself.

A Robinson Crusoe-reading boy,
Whose pockets bulge with trash,
Who knows the use of rod and gun
And where the brook trout splash.

It's true he'll sit in the easiest chair,
With hat on his tousled head;
That his hands and feet are everywhere—
For youth must have room to spread.
But he doesn't dub his father "old man,"
Nor deny his mother's call;
Nor ridicule what his elders say,
Nor think that he knows it all.

A rough and wholesome, natural boy,
Of a good, old-fashioned clay;
God bless him, if he's still on earth,
For he'll make a man some day.

Author Unknown.

Painless.

A schoolboy being asked by his teacher how he should flog him, replied: "If you please, sir, I should like to have it on the Italian system of penmanship, the heavy stroke upward and the downward one light."

Chinese youngsters are earnest students, but sometimes their struggles with the English language and customs are amusingly pathetic. When asked: "What are the five great races of mankind?" a serious minded boy of the Flowery Kingdom made grave answer:

"The hundred yards, the hurdles, the quarter-mile, the mile and the three-miles."

Another student, trying to translate "Out of sight," rendered the phrase thus:

"Invisible, insane."

"Moral" Realists.

William Dean Howells is a stout opponent of those novelists who, under the pretext of reforming their readers, write books about vice.

"Such writers," said Mr. Howells, "remind me of a lad whose mother said to him:

"Why, Johnny, I do believe you're teaching that parrot to swear!"

"No, I'm not, mother," the boy replied; "I'm just telling it what it mustn't say."

At the School Board Meeting.

Member Johnson—If Superintendent Smith makes any such charge I shall denounce him as a liar.

President—Mr. Smith, I call you to order. The rules of this board do not allow you to go that far—

Member Jones—Then I call Superintendent Smith a liar as far as it is permitted by the rules of this board.



The Right Boy.

Employer to Applicant—Are you truthful?
"Y-es, but not so's to queer your business."
—Life.

He Couldn't Find It.

It is the custom at a school up state for the teachers to write on the blackboard any instruction they desire the janitor to receive. The other morning the janitor saw written:

"Find the greatest common divisor."

"Halloa!" he exclaimed. "Is that durned thing lost again?"

Remarkable Child.

First Teacher—"Does Edith's little girl ever make any bright answers?"

Second Teacher—"No; she always knows her lessons."

The Maintenance of a Microbe.

A country school teacher was cashing her monthly check at the bank says Lippincotts. The teller apologized for the filthy condition of the bills, saying, "I hope you're not afraid of microbes."

"Not a bit of it," the schoolmarm replied. "I'm sure no microbe could live on my salary!"

Inquisitive.

The curate of a large and fashionable church was endeavoring to teach the significance of white to a Sunday-school class.

"Why," said he, "does a bride invariably desire to be clothed in white at her marriage?" As no one answered he explained. "White," said he, "stands for joy, and the wedding day is the most joyous occasion of a woman's life."

A small boy queried, "Why do the men all wear black?"

Gut Ausgegangen.

"Ja, liebe Frau, man muss die Jugend mit allen Mitteln zur Arbeit anspornen. Ich habe z. B. meinen drei Buben je eine schoene silberne Uhr versprochen, wenn sie dieses Jahr ein gutes Schulzeugnis heimbringen."

"Nicht, moeglich, Herr Professor! Gleich drei silberne Uhren?"

"Jawohl! So bin ich. . . Zum Glueck sind sie mir alle drei durchgefallen."

Educational Trade Directory

The names given below are those of the leading and most reliable Manufacturers, Publishers and Dealers in the United States. None other can receive a place in this Directory. Everything required in or about a schoolhouse may be secured promptly and at the lowest market price by ordering from these Firms.

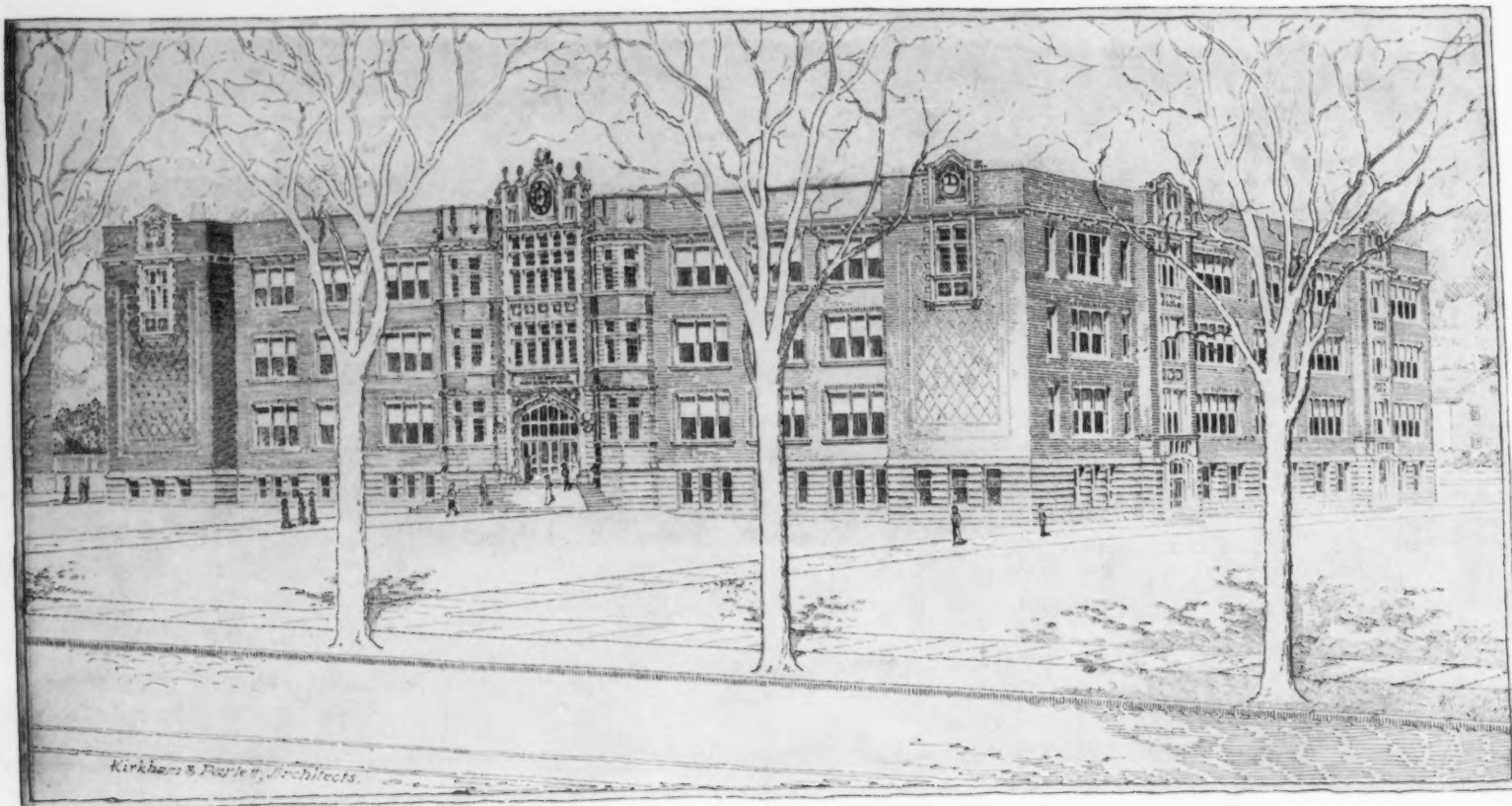
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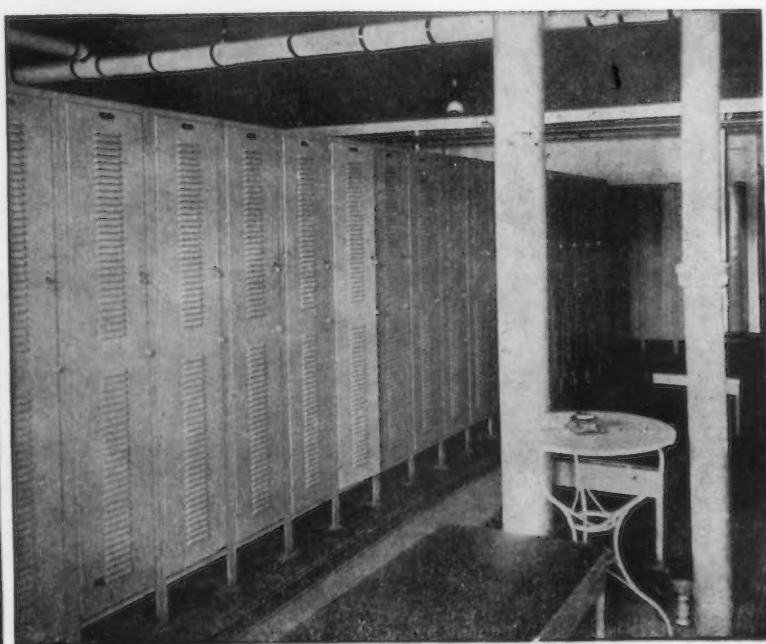
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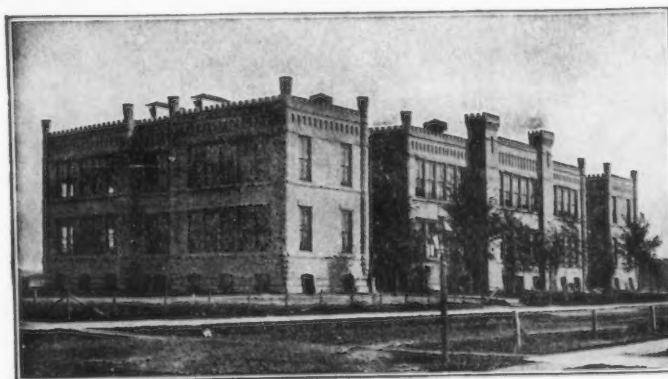
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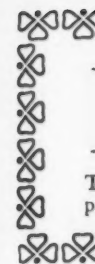
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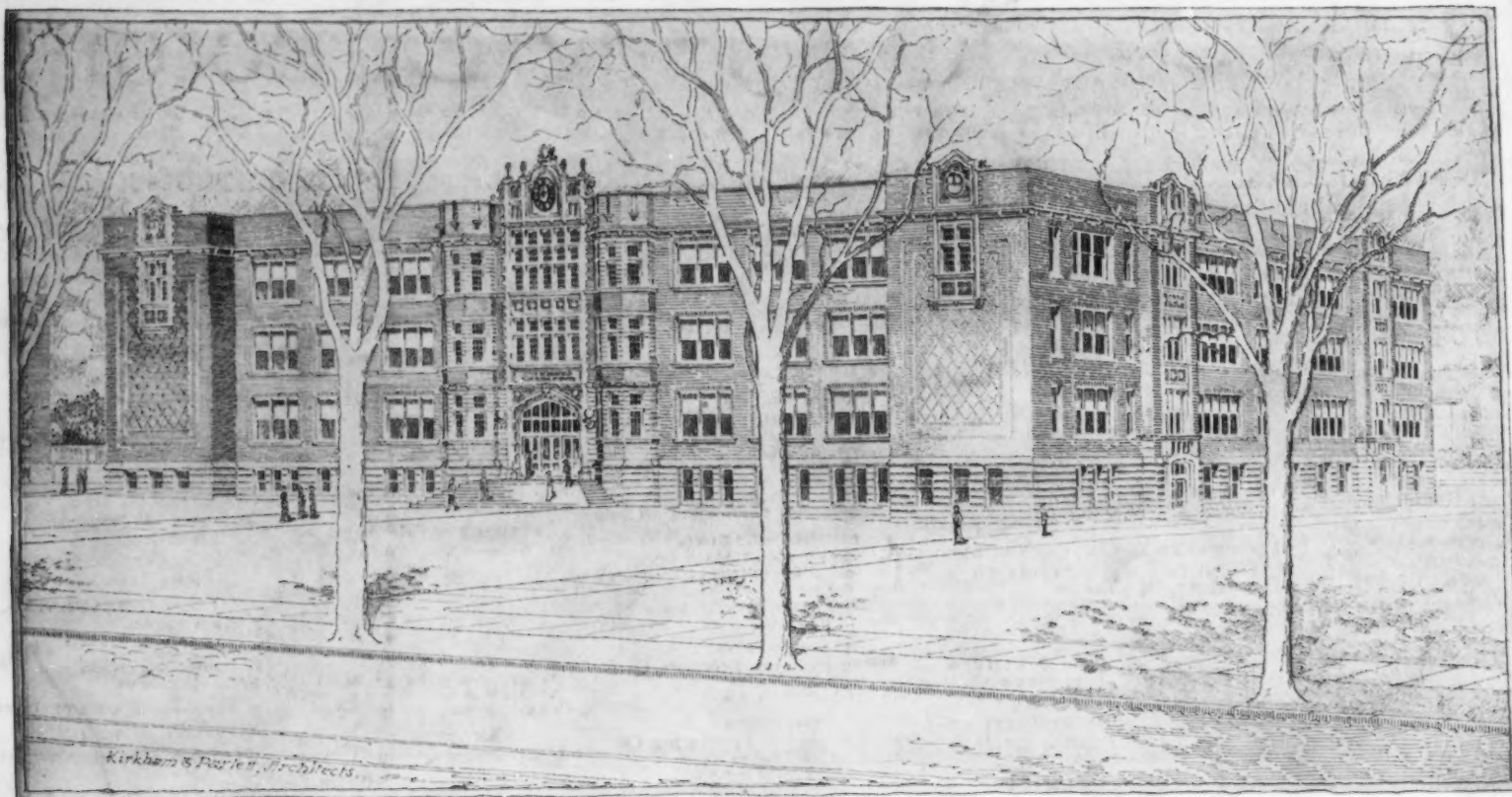
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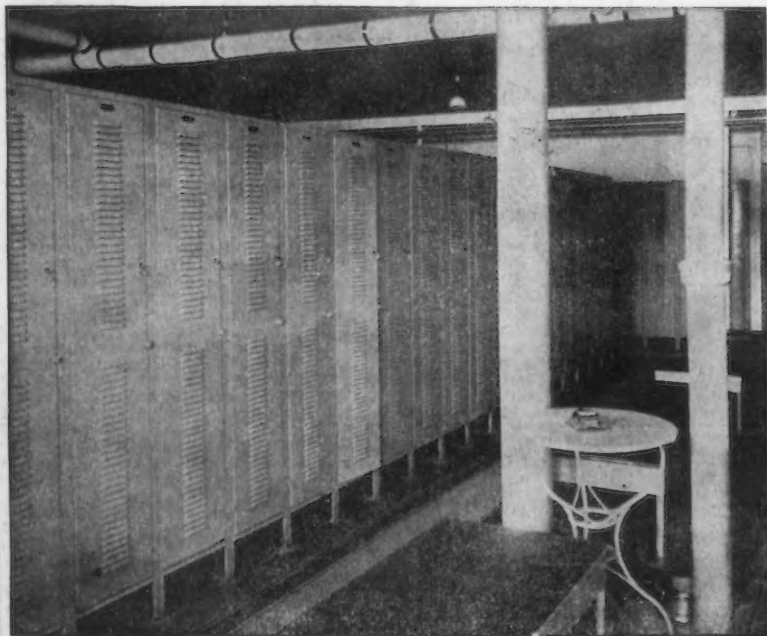
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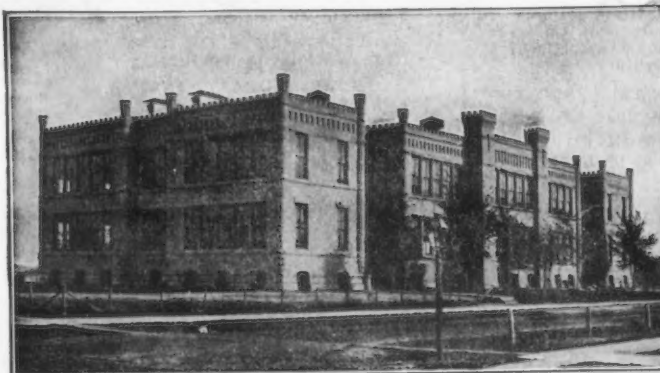
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